



GRIN-Global – Administrator Webinar

Objective:

Perform administrative functions for GRIN-Global
using the Admin Tool and other tools

martin reisinger,
instructor

Credits

- Brock Weaver – Consultant, Admin Tool designer & developer
- Kurt Endress – USDA, AT & Updater modifier & guru, GG expert & resource
- Juan Carlos Alarcon – CIMMYT, GG Frontrunner
- Matija Obreza – Crop Trust, Information Systems Manager
- Pete Cyr – USDA, CT developer
- Edwin Rojas – CIP, Wizard contributor, GG Community Facebook

Agenda: Understand...

- GG components
- Schema: categories; areas; dataviews
- Naming conventions
- Parent-child relationships
- Key tables: Sites, Geography, Cooperators, SYS_...
- Data dictionary (& generate it)
- Determining field characteristics / SQL Server Management Studio (SSMS)

Agenda: How to use...

- AT Overview – interface
- Users:
 - Add / update,
 - Users to Groups
 - Assigning Permissions to Users
 - Searching Web users
- GG Updater

Quiz!

What language was GRIN originally programmed in?

- Machine
- Assembly
- COBOL
- FORTRAN
- Pascal
- C#

What language was GRIN originally programmed in?

- Machine
- Assembly
- COBOL
- **FORTRAN**
- Pascal
- C#

When was the Admin Tool written?

- a. 2005 - 2006
- b. 2008 - 2010
- c. 2012 – 2015

When was the Admin Tool written?

- a. 2005 - 2006
- b. 2008 - 2010
- c. 2012 – 2015

Which abbreviation does not belong in the mix?
(only 1 answer)

AT	DV	PW
CR	GG	SQL
CT	IIS	SSMS
DB	MR-CF	ST
DBA	MS	



Which does not belong in the mix?
(only 1 answer)

AT

DV

PW

CR

GG

SQL

CT

IIS

SSMS

DB

MR-CF

ST

Marty Reisinger Chicken Farmer

DBA

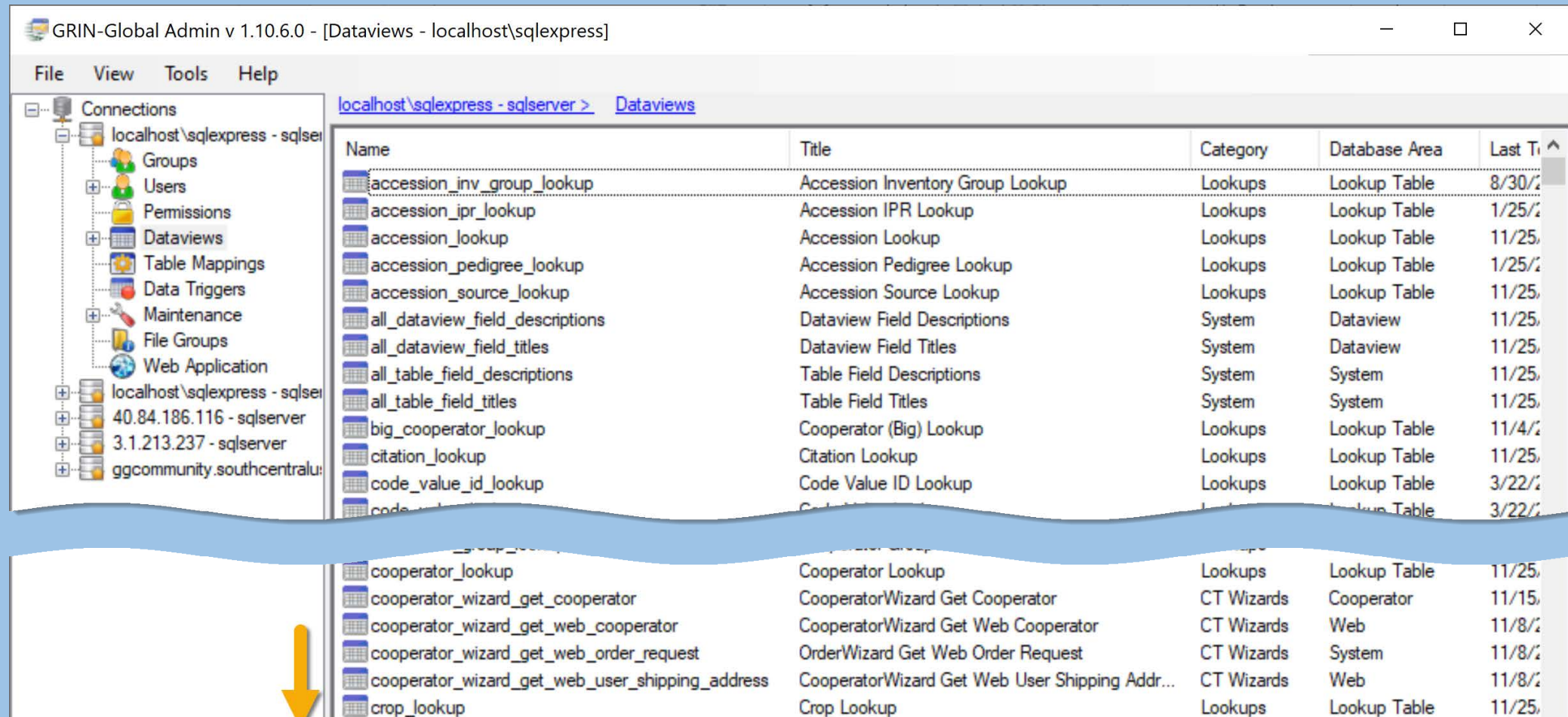
MS

GG Environment

- **flexible** – *dataviews* can be added / modified
- **expandable** – *wizards* can be added
- **customizable** – codes easily added;
triggers enabled / or disabled;
languages can be added

Flexible...

Many dataviews



GRIN-Global Admin v 1.10.6.0 - [Dataviews - localhost\sqlexpress]

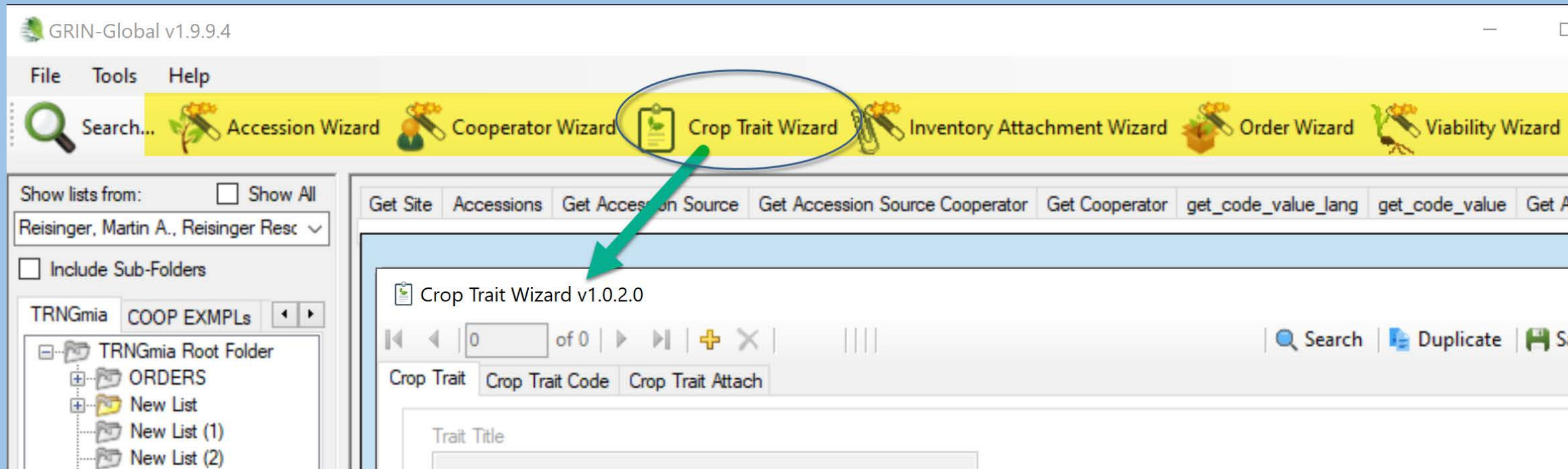
File View Tools Help

localhost\sqlexpress - sqlserver > [Dataviews](#)

Name	Title	Category	Database Area	Last T
accession_inv_group_lookup	Accession Inventory Group Lookup	Lookups	Lookup Table	8/30/2
accession_ipr_lookup	Accession IPR Lookup	Lookups	Lookup Table	1/25/2
accession_lookup	Accession Lookup	Lookups	Lookup Table	11/25/
accession_pedigree_lookup	Accession Pedigree Lookup	Lookups	Lookup Table	1/25/2
accession_source_lookup	Accession Source Lookup	Lookups	Lookup Table	11/25/
all_dataview_field_descriptions	Dataview Field Descriptions	System	Dataview	11/25/
all_dataview_field_titles	Dataview Field Titles	System	Dataview	11/25/
all_table_field_descriptions	Table Field Descriptions	System	System	11/25/
all_table_field_titles	Table Field Titles	System	System	11/25/
big_cooperator_lookup	Cooperator (Big) Lookup	Lookups	Lookup Table	11/4/2
citation_lookup	Citation Lookup	Lookups	Lookup Table	11/25/
code_value_id_lookup	Code Value ID Lookup	Lookups	Lookup Table	3/22/2
code_value_lookup	Code Value Lookup	Lookups	Lookup Table	3/22/2
cooperator_lookup	Cooperator Lookup	Lookups	Lookup Table	11/25/
cooperator_wizard_get_cooperator	CooperatorWizard Get Cooperator	CT Wizards	Cooperator	11/15/
cooperator_wizard_get_web_cooperator	CooperatorWizard Get Web Cooperator	CT Wizards	Web	11/8/2
cooperator_wizard_get_web_order_request	OrderWizard Get Web Order Request	CT Wizards	System	11/8/2
cooperator_wizard_get_web_user_shipping_address	CooperatorWizard Get Web User Shipping Addr...	CT Wizards	Web	11/8/2
crop_lookup	Crop Lookup	Lookups	Lookup Table	11/25/

Expandable...

Wizards



Customizable Codes

Get Crop	Get Crop Trait	Get Crop Trait Lang	Get Crop Trait Code	Get Crop Trait Code Lang	Get Method	Get Code Value Language
	Code Value Lang ID	Code Value	Language	Title	Description	
9041	ACCESSION_ACTION.SPLIT_ACC	العربية	فصل إلى مدخلات عديدة	يتم المدخل إلى أكثر من مدخل واحد		
10212	ACCESSION_ACTION.SPLIT_ACC	Русский	Разделение на несколько обр...	Образец был разделен на не...		
2181	ACCESSION_ACTION.SUBLINED	English	Accession split into sublines	Heterogeneous plant introduction		
5407	ACCESSION_ACTION.SUBLINED	Español	Accesión dividida en sublíneas			
7575	ACCESSION_ACTION.SUBLINED	Français	L'accession se subdivise en sou...			
8792	ACCESSION_ACTION.SUBLINED	العربية	تم فصل المدخلات إلى سلالات تابعة			
10213	ACCESSION_ACTION.SUBLINED	Русский	Образец разделен на сублинии			
2182	ACCESSION_ACTION.SVALBARD	English	Backed up at Svalbard Global S...	Accession is backed up at Sval...		
5412	ACCESSION_ACTION.SVALBARD	Español	Copia de seguridad en Bóveda ...			

Customizable

Triggers

GRIN-Global Admin v 1.10.6.0 - [Data Triggers - localhost\sqlexpress]

File View Tools Help

Connections

- localhost\sqlexpress - sqls
- Groups
- Users
- Permissions
- Dataviews
- Table Mappings
- Data Triggers**
- Maintenance
- File Groups
- Web Application
- localhost\sqlexpress - sqls

localhost\sqlexpress - sqlserver > Data Triggers

Dataview	Table	Assembly	Class	Description	Enabled?	Virtual File
	accession	GrinGlobal.Additi...	GrinGlobal.Additi...	Checks accession for valid taxonomy ...	Y	~/bin/Grin
	accession	GrinGlobal.Additi...	GrinGlobal.Additi...	Create a accession_inv_name row for...	N	~/bin/Grin
	accession	GrinGlobal.Additi...	GrinGlobal.Additi...	Creates Accession Re-ID annotation i...	Y	~/bin/Grin
	accession	GrinGlobal.Additi...	GrinGlobal.Additi...	Allows assigning of sequential number...	Y	~/bin/Grin
	accession	GrinGlobal.Additi...	GrinGlobal.Additi...	Creates action on accession number ...	Y	~/bin/Grin
	accession_action	GrinGlobal.Additi...	GrinGlobal.Additi...	Checks Accession Action date order.	Y	~/bin/Grin
	accession_inv_...	GrinGlobal.Additi...	GrinGlobal.Additi...	Checks Accession Inv Annotation.	Y	~/bin/Grin
	accession_inv_...	GrinGlobal.Additi...	GrinGlobal.Additi...	Updates accession name rank.	Y	~/bin/Grin
	accession_inv...	GrinGlobal.Additi...	GrinGlobal.Additi...	Checks Accession IPR	Y	~/bin/Grin

Overview of GG Components

- Operating System Windows (& Windows IIS)
- Database
- Applications
- Supplementary Software
- Extensions
- Other Components

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- **Database** **MS SQL Server; SSMS**
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- Operating System Windows (& Windows IIS)
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- Applications **Web Application, CT, ST, PW, AT, Updater**
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- Operating System Windows (& Windows IIS)
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- Supplementary Software **Crystal Reports *Viewer***
- Extensions
- Other Components

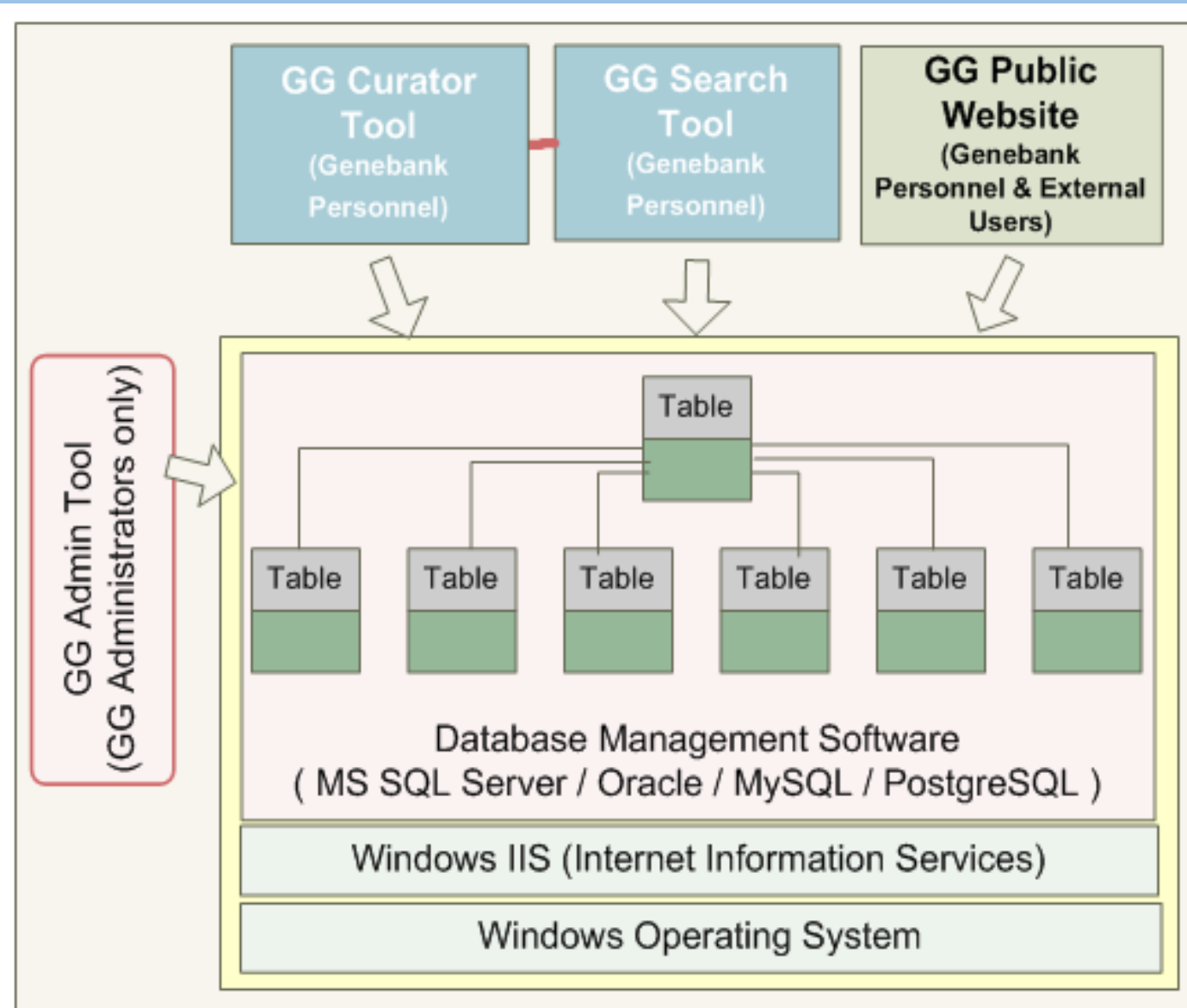
Overview of GG Components

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- Extensions **Forms & Wizards**
- Other Components

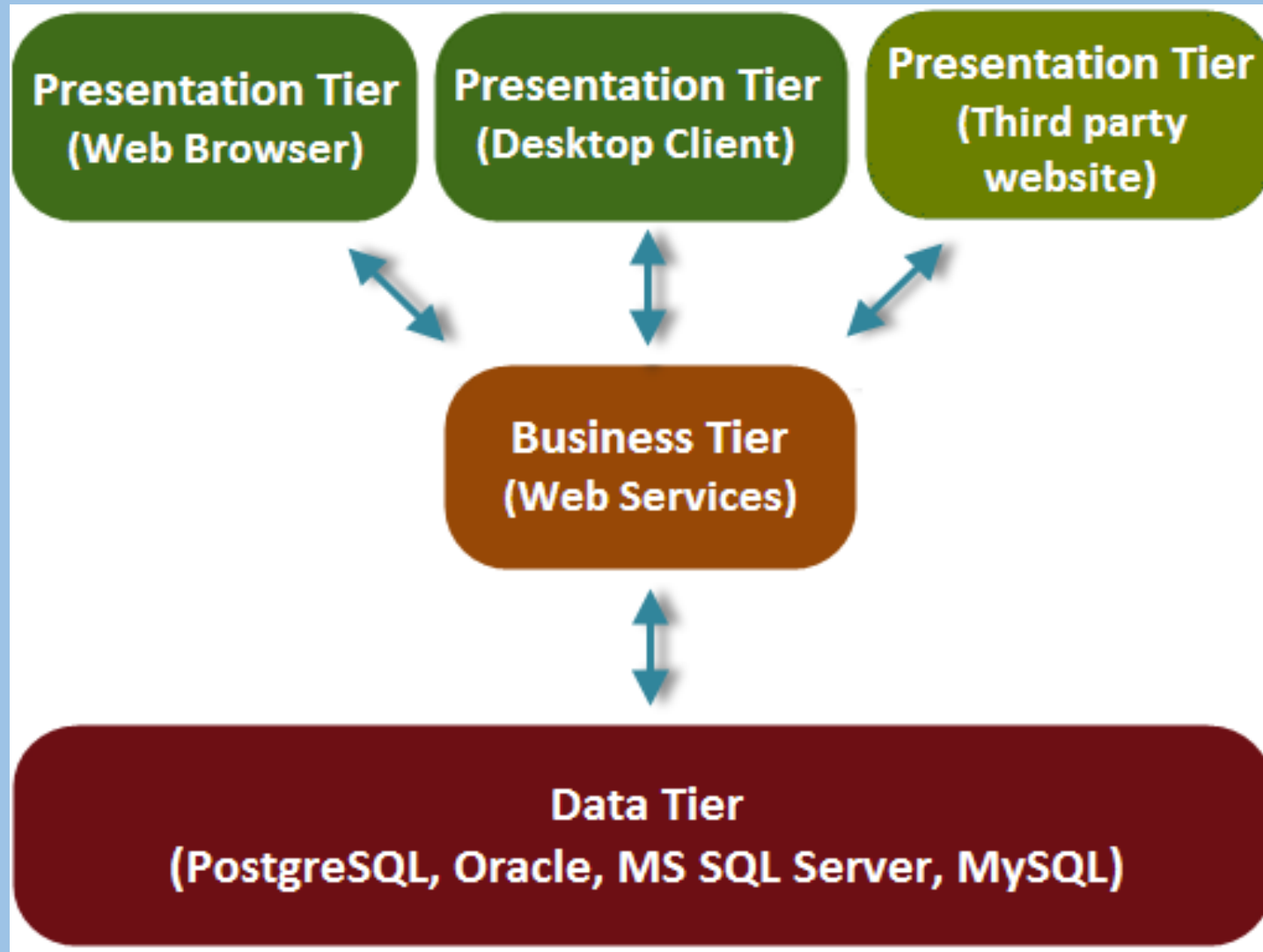
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- Applications Web Application, CT, ST, PW, AT, Updater
- Supplementary Software Crystal Reports *Viewer*
- Extensions Forms & Wizards
- Other Components **Dataviews & Images**

GG: Environment



GG: 3 Tier Architecture



GRIN-Global



genbank
staff

GG
Database
Administrator
(DBA)

public
users



Public Website

genbank
staff

GG: Software Components

- **Web Application (“middle tier”)**

Web site *and* web services used for interacting with all GRIN-Global data

Makes calls into the database and search engine as requested

- **Updater**

for updating the GG *server* applications

...continued... Software Components...

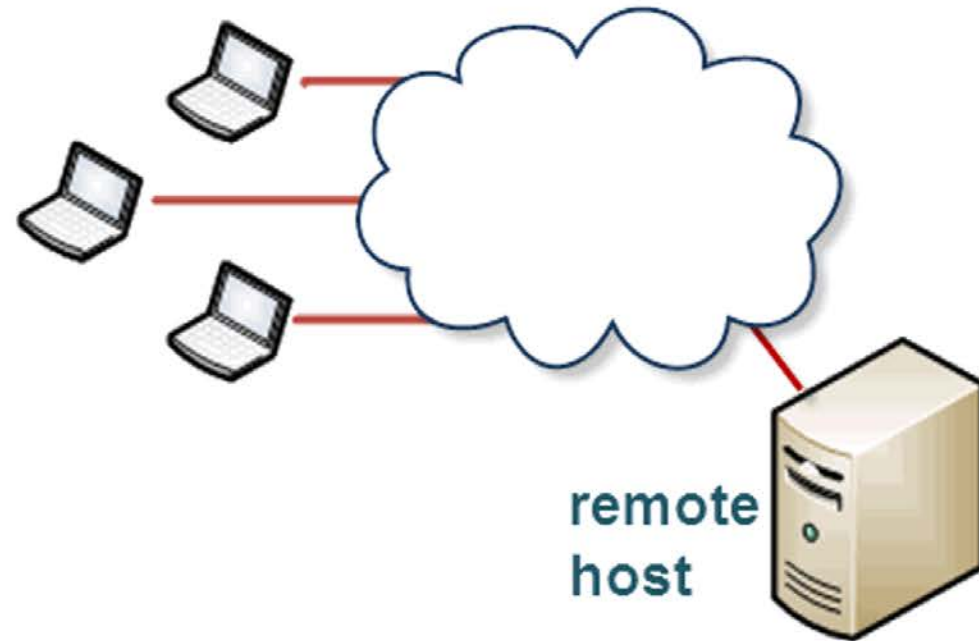
- **Curator Tool**
designed for genbank staff for viewing and manipulating GG data
- **Search Tool**
for performing searches of GRIN-Global data
- **Admin Tool**
for administering GRIN-Global
Requires a direct database connection

Customizable: Configurations

Alternative 1: Standalone PC

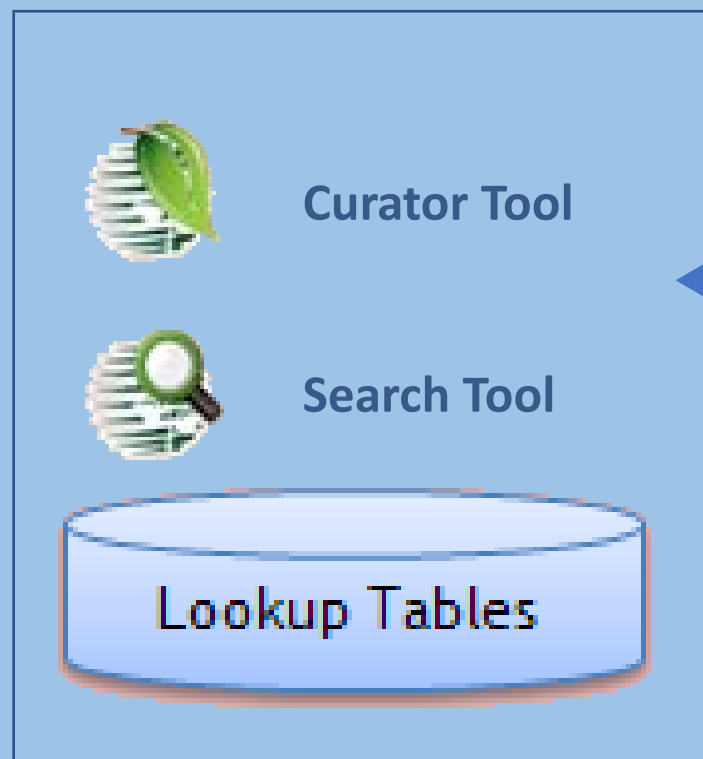


Alternative 2: PC Networked to a Server

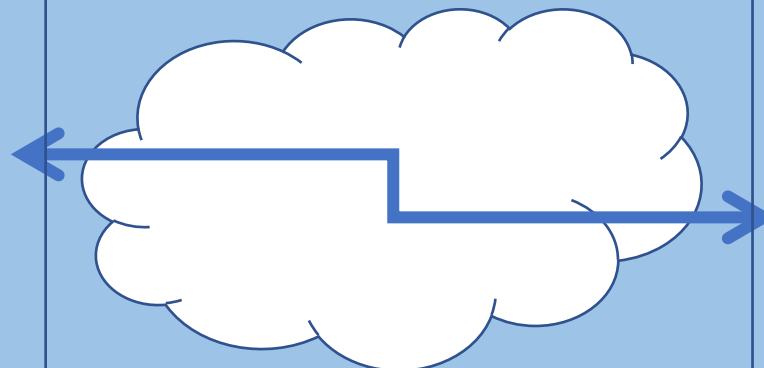


GG in a Network Configuration

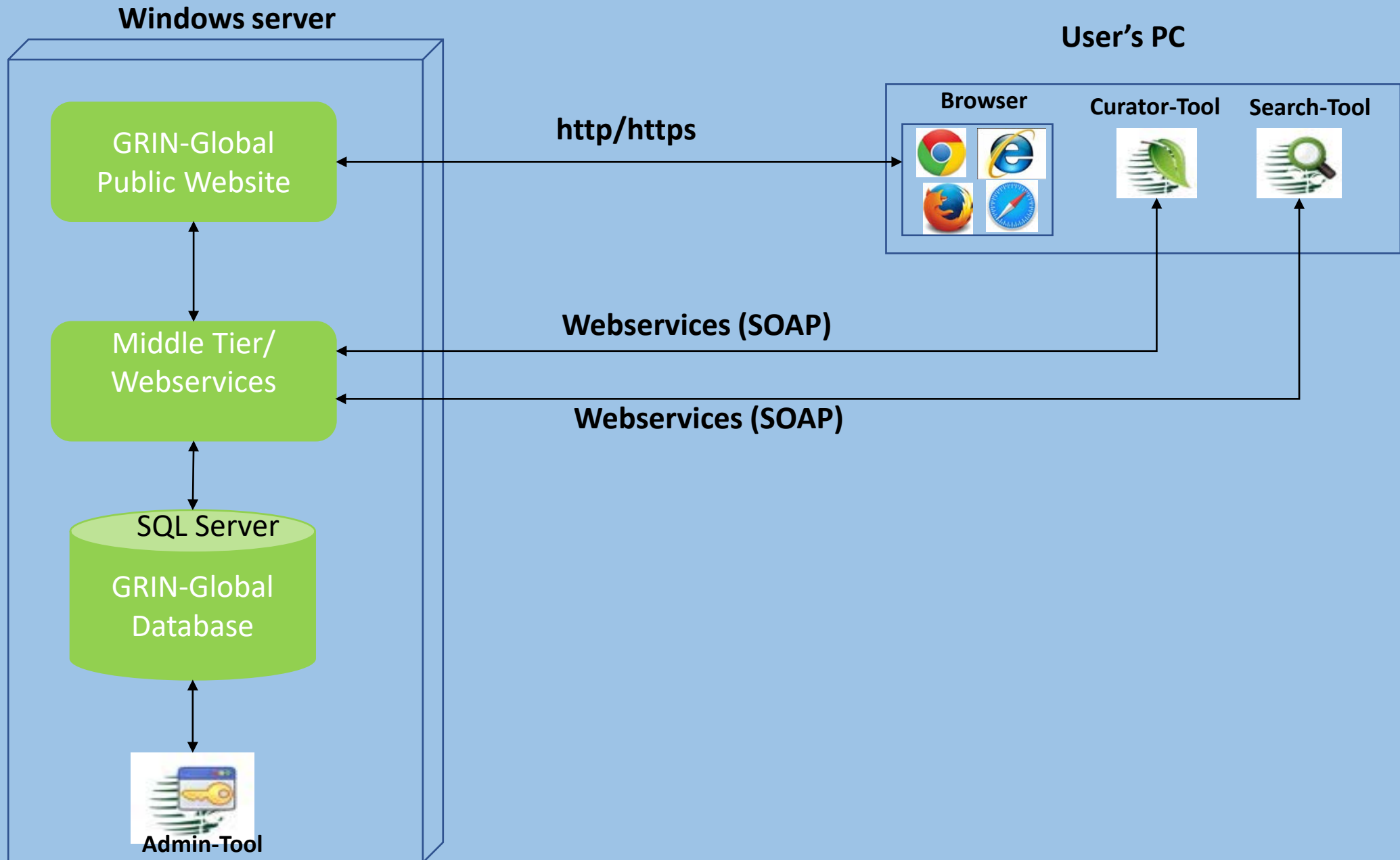
User's PC



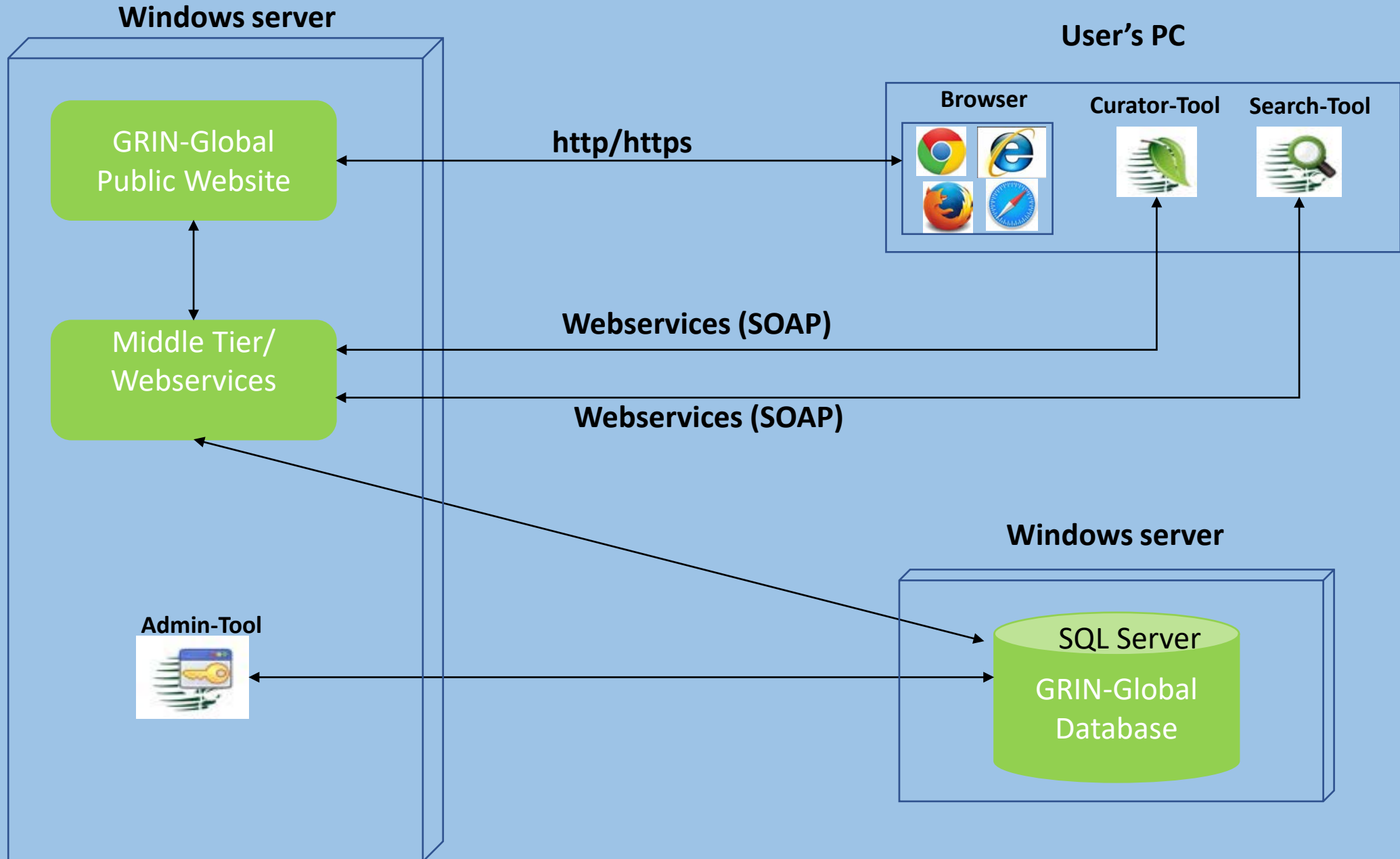
Server



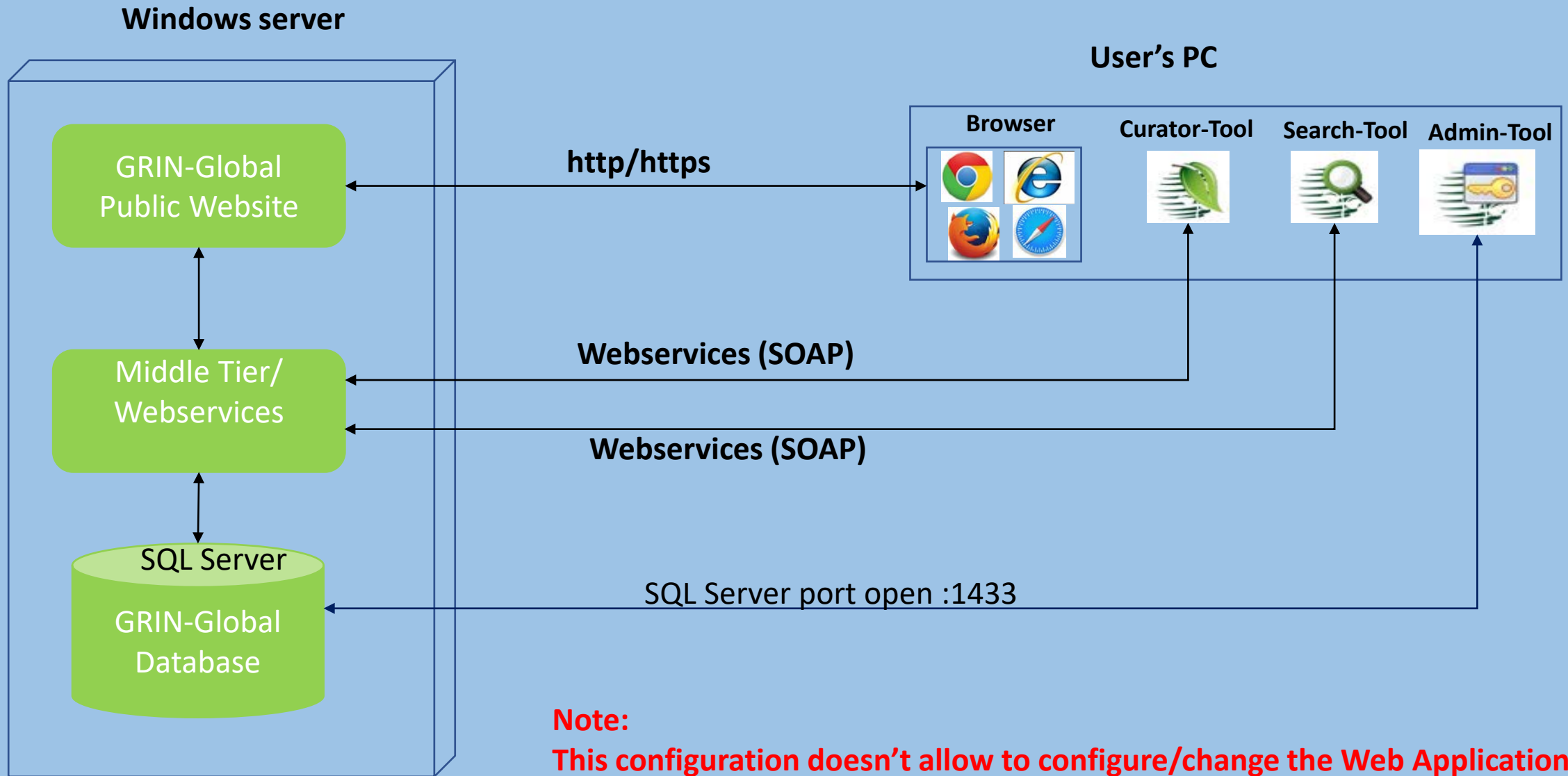
Scenario I. GRIN-Global server components in one server



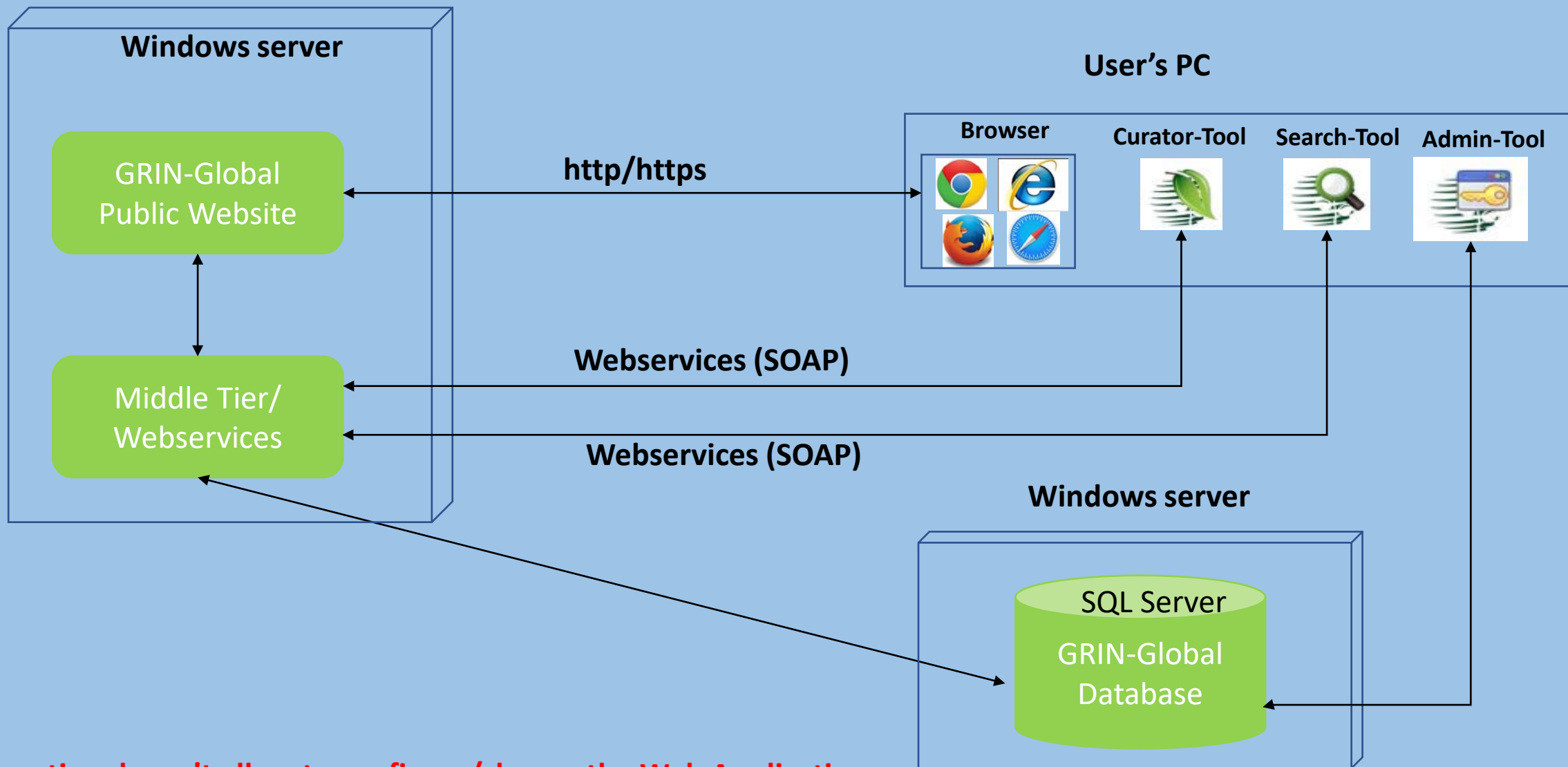
Scenario II. GRIN-Global server components in two servers



Scenario III. GRIN-Global PW, Services and Database in one server but Admin-Tool installed in user's computer



Scenario IV. GRIN-Global PW, Services and Database in one server but Admin-Tool installed in user's computer



Note:

This configuration doesn't allow to configure/change the Web Application

Database: MS SQL Server (Optional: SQL Server Management Studio)

The screenshot displays the Microsoft SQL Server Enterprise Manager interface. On the left, the Object Explorer shows the server structure for 'DESKTOP-35\SQLEXPRESS (SQL Server 12.0.4522 - DESKTOP)'. The 'Databases' folder is expanded, showing 'System Databases', 'gg1102', 'gg191', and 'gringlobal'. Under 'gringlobal', the 'Tables' folder is expanded, and 'dbo.accession' is selected. The main window shows a SQL query in 'SQLQuery1.sql' with the following text:

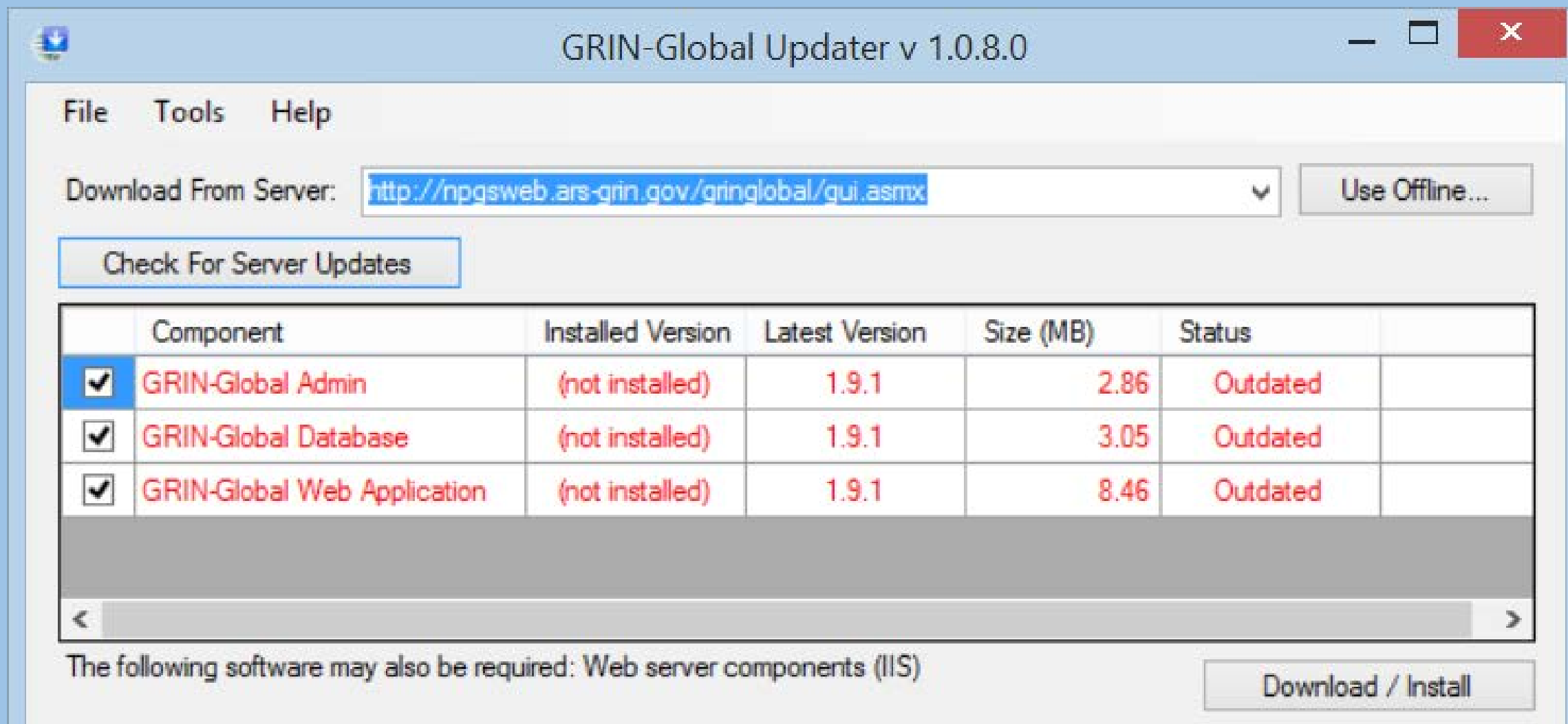
```
/****** Script for SelectTopNRows command from SSMS *****/  
SELECT TOP 1000 [accession_id]  
    ,[doi]  
    ,[accession_number_part1]  
    ,[accession_number_part2]  
    ,[accession_number_part3]  
    ,[is_core]  
    ,[is_backed_up]  
    ,[backup_location1_site_id]  
    ,[backup_location2_site_id]  
    ,[status_code]  
    ,[life_form_code]  
    ,[improvement_status_code]  
    ,[reproductive_uniformity_code]  
    ,[initial_received_form_code]
```

Below the query editor, the 'Results' tab is active, displaying a table with 9 columns and 13 rows of data. The columns are: accession..., doi, accession_number_pa..., accession_number_pa..., accession_number_pa..., is_c..., is_backed..., and backup_... The data is as follows:

	accession...	doi	accession_number_pa...	accession_number_pa...	accession_number_pa...	is_c...	is_backed...	backup_...
134	134	NULL	BRA	692	NULL	Y	N	NULL
135	135	NULL	BRA	696	NULL	N	N	NULL
136	136	NULL	BRA	697	NULL	Y	N	NULL
137	137	NULL	BRA	698	NULL	Y	N	NULL
138	138	NULL	BRA	666	NULL	N	N	NULL
139	139	NULL	BRA	670	NULL	N	N	NULL
140	140	NULL	BRA	675	NULL	Y	N	NULL
141	141	NULL	BRA	676	NULL	N	N	NULL
142	142	NULL	BRA	677	NULL	N	N	NULL
143	143	NULL	BRA	684	NULL	N	N	NULL

Updater Program

for installing the server components



Curator Tool

designed for staff to create & manage data

GRIN-Global v1.9.9.4

File Tools Help

Search... Accession Wizard Cooperator Wizard Inventory Attachment Wizard Order Wizard Viability Wizard

Show lists from: ☐ Show All
TrNG Resource Group, Inc. v

☐ Include Sub-Folders

TRNG ContactUsJuly

TRNG Root Folder
ORDERS
325004

Get Site Accessions Get Accession Pedigree Get Cooperator Inventory Get Order Request Get Taxonomy Crop Map Get Crop Trait Observation

Accession ID	Accession Prefix	Accession Number	Accession Suffix	Taxon	Name	Origin	Maintenance Site
1008986	PI	617282		Humulus lupulus var. lupulus	Pacific Gem	United States	COR
1200107	PI	264597		Humulus lupulus var. lupulus	Shinshuwase	Japan	COR
1193790	PI	250809		Humulus lupulus var. lupulus	Yugoslavia Golding	Former Serbia an...	COR
1008956	PI	617281		Humulus lupulus var. lupulus	Osvald Saazer Clone 7...	Czech Republic	COR
1430744	PI	535808		Humulus lupulus var. lupulus	Mt. Hood	United States, Or...	COR
1453561	PI	558589		Humulus lupulus var. lupul...	H. lupulus var. lupuloid...	United States, Wi...	COR
2101094	MAR	1		Unident spp.	Yellow Mello		NC7
1453570	PI	558598		Humulus lupulus var. lupulus	USDA 19173 Male	United States, Or...	COR
1413696	PI	518760		Humulus lupulus var. lupulus	USDA 19058 Male	United States, Or...	COR
1453579	PI	558607		Humulus lupulus var. lupulus	H. lupulus var. lupulus ...	Former Serbia an...	COR
2101028	NA	1	RRG	Humulus lupulus var. lupul...	MAR 1	United States, M...	NC7
1227631	PI	302781		Humulus lupulus var. lupulus	Brewer's Gold	United Kingdom, ...	COR

Column Chooser Other Options

1 of 12 Refresh Data

Data Editing
Edit Data Save Data Cancel

☐ Hot-Sync Treeview with Data

Showing rows: 12 of 12 | Connected to: <https://training.ars-grin.gov/GRINGlobal/GUI.aspx>



Required Components

Curator Tool (CT)
requires Windows; IIS

Several programs are
installed with the CT:

Crystal
Reports
Viewer

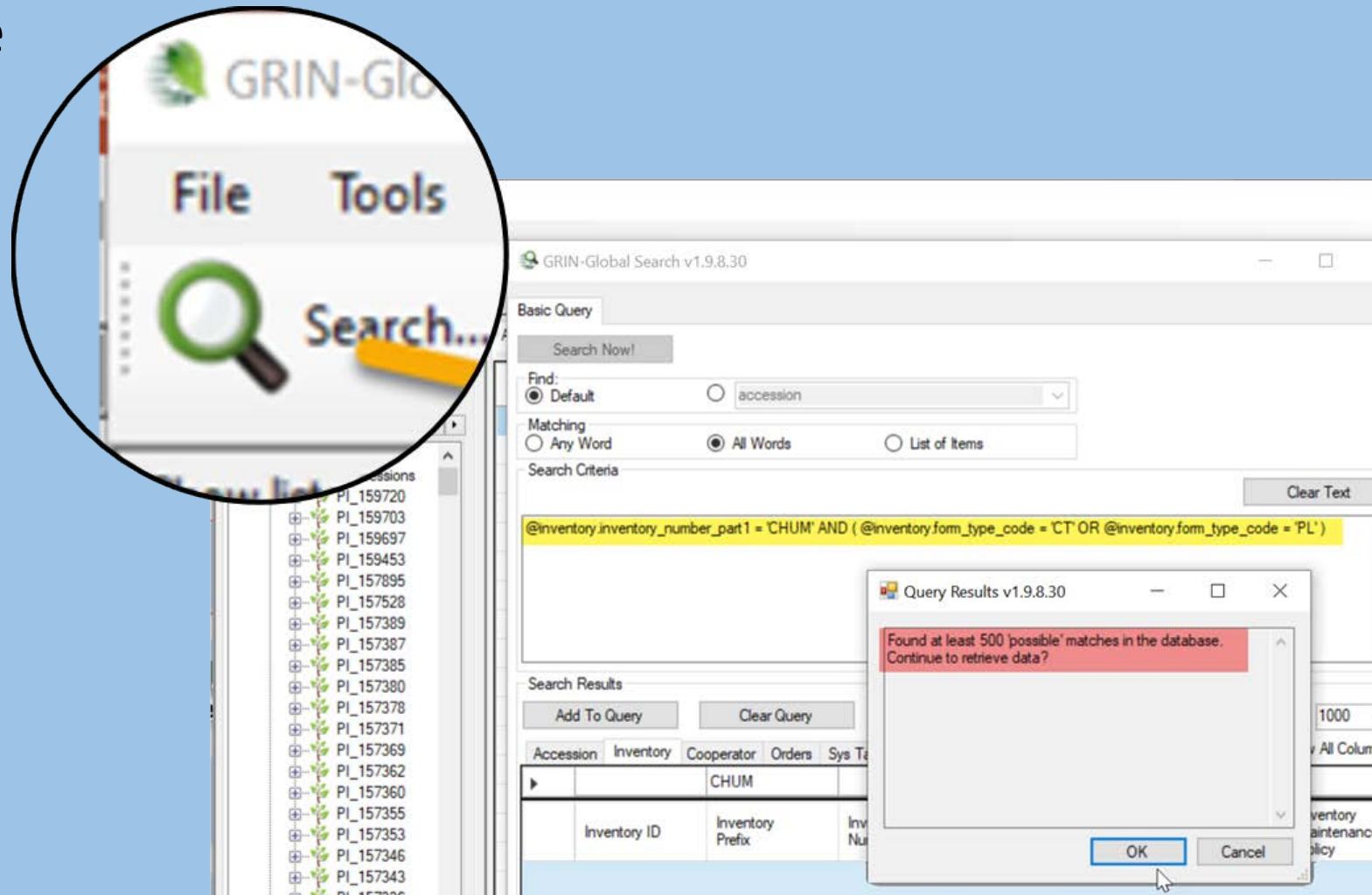


SQL
Server
Express

.net

Search Tool

used by genebank staff to locate data; accesses GG's Search Engine

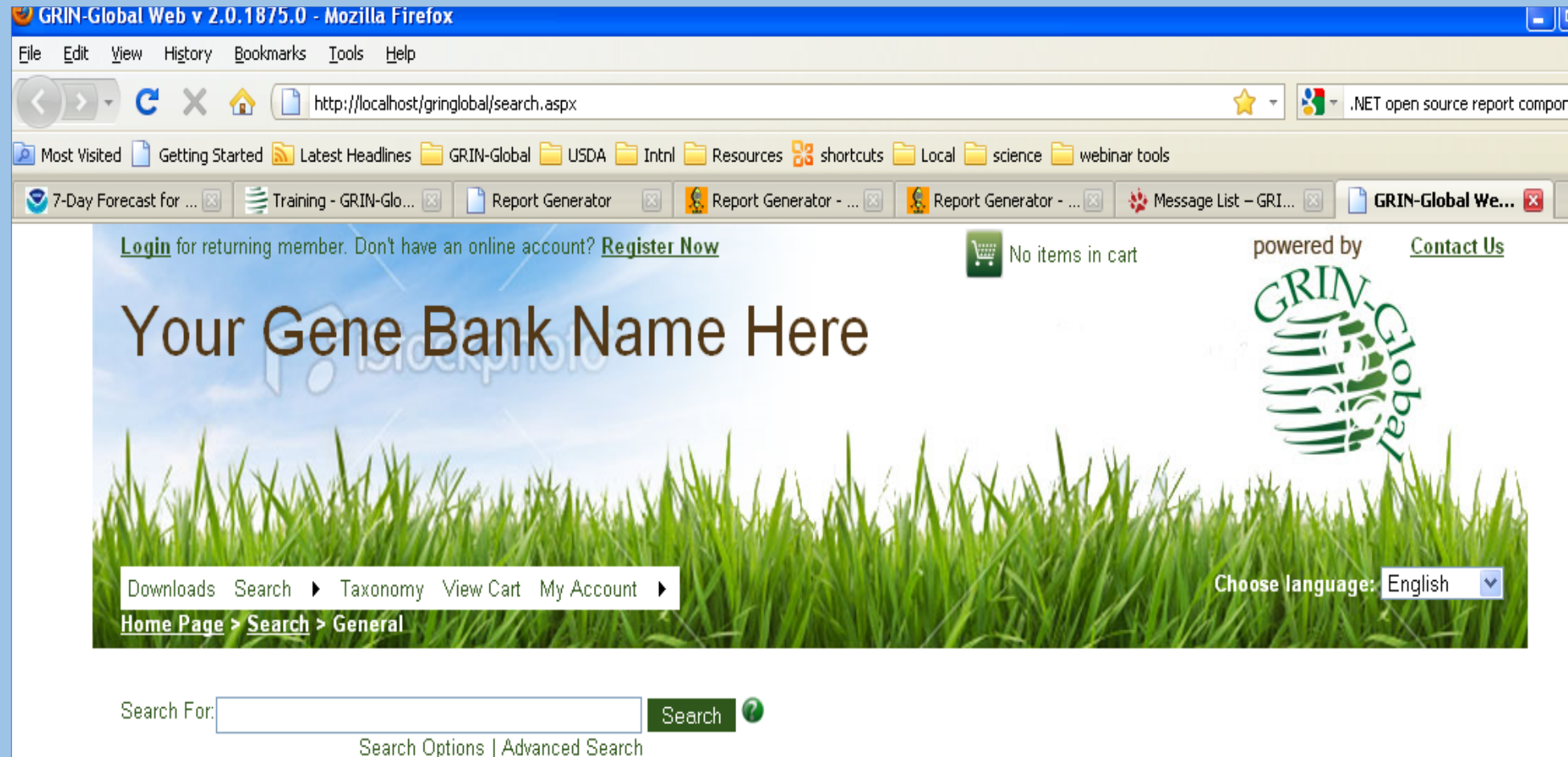


Search Tool

- installed with the Curator Tool
- communicates with Search Engine
- search fields can be configured by the GG administrator (session 3)

Public Website (PW)

designed for external clients searching the GG database; optional



Admin Tool

used for managing CT user accounts, codes, dataviews, triggers, etc.

GRIN-Global Admin v 1.10.6.0 - [Code Groups - localhost\sqlexpress]

File View Tools Help

Connections

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

localhost\sqlexpress - sqlserver > Maintenance > Code Groups

Name	Referenced By Tables/Dataviews	Values	Last To
ACCESSION_ACTION	3	88	6/14/20
ACCESSION_LIFE_FORM	15	12	10/5/20
ACCESSION_NAME_TYPE	3	17	2/9/201
ACCESSION_QUARANTINE_STA...	2	10	2/3/201
ACCESSION_QUARANTINE_TYPE	2	6	10/5/20
ACCESSION_RESTRICTION_TYPE	4	32	7/2/201
ACCESSION_SOURCE_HABITAT...	4	32	5/4/201
ACCESSION_SOURCE_TYPE	9	3	10/5/20
ACCESSION_STATUS	13	5	4/2/202
ACTIVE_SITE	0	1	10/5/20
ANNOTATION_TYPE	2	4	10/5/20

Curator Tool

- CT is a .NET application
- connects to the web services applications (middle tier)
- interface – genbank staff person searches, reads, & updates data
- requires Windows elevated privileges for installing (session 6)
- installed via a self-extracting installer – (.exe file)

Crystal Reports

- .rpt files come with GG builds
- .rpt files can be *displayed* by the CR Viewer
- CR Viewer is installed with the CT
- more details in Session 6

How Does the CT Connect to the Server?

Web Services List Editor

List (Friendly) Name

- JCA zure
- TRNG NPGS
- PROD NPGSweb
- NordGenTRNG DB
- AzureBlue
- localhost
- DEV
- List (Friendly) Name
- IRRI TRNG

Properties

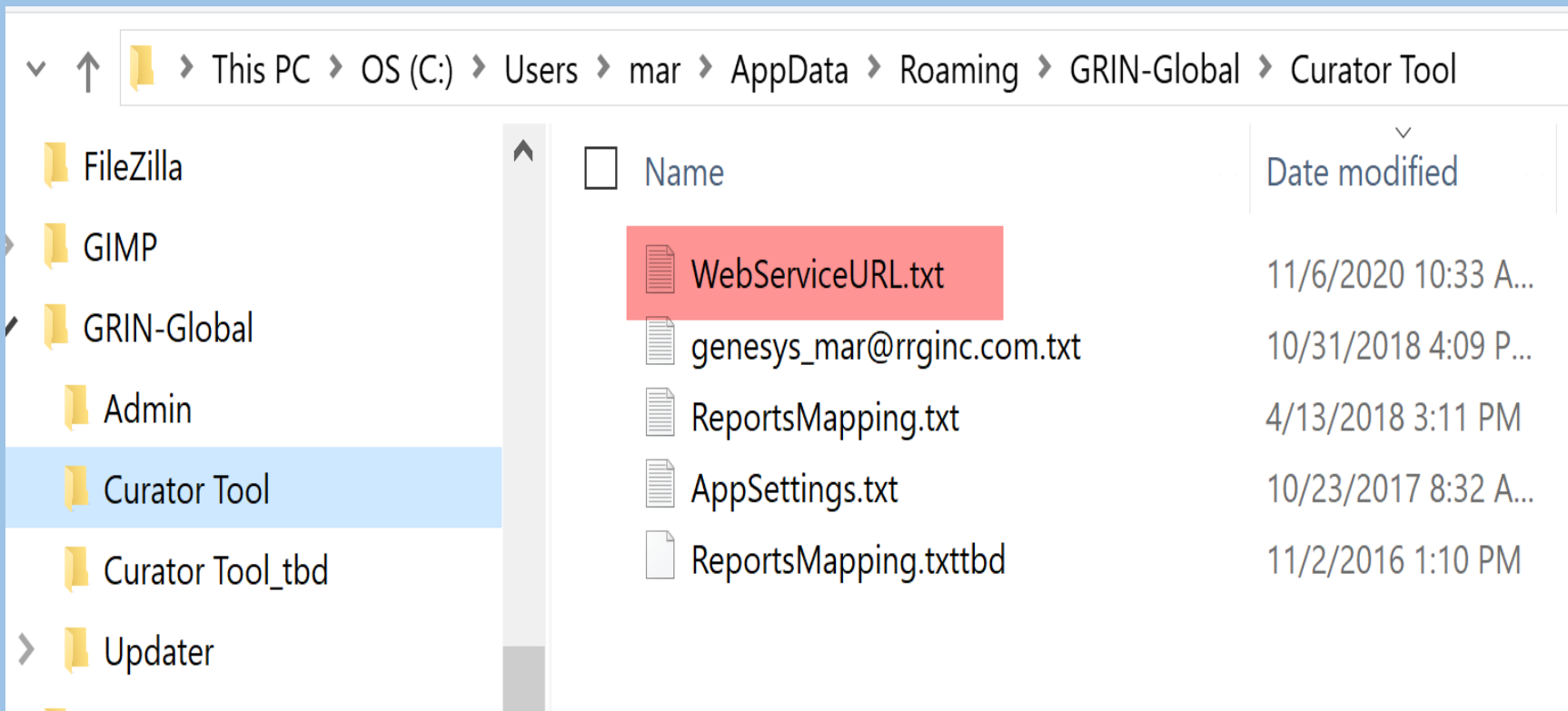
List Display Name:
JCA zure

☐ Use SSL ☐ Use LDAP

Server Name (or IP Address):
ggcommunity.southcentralus.cloudapp.a.

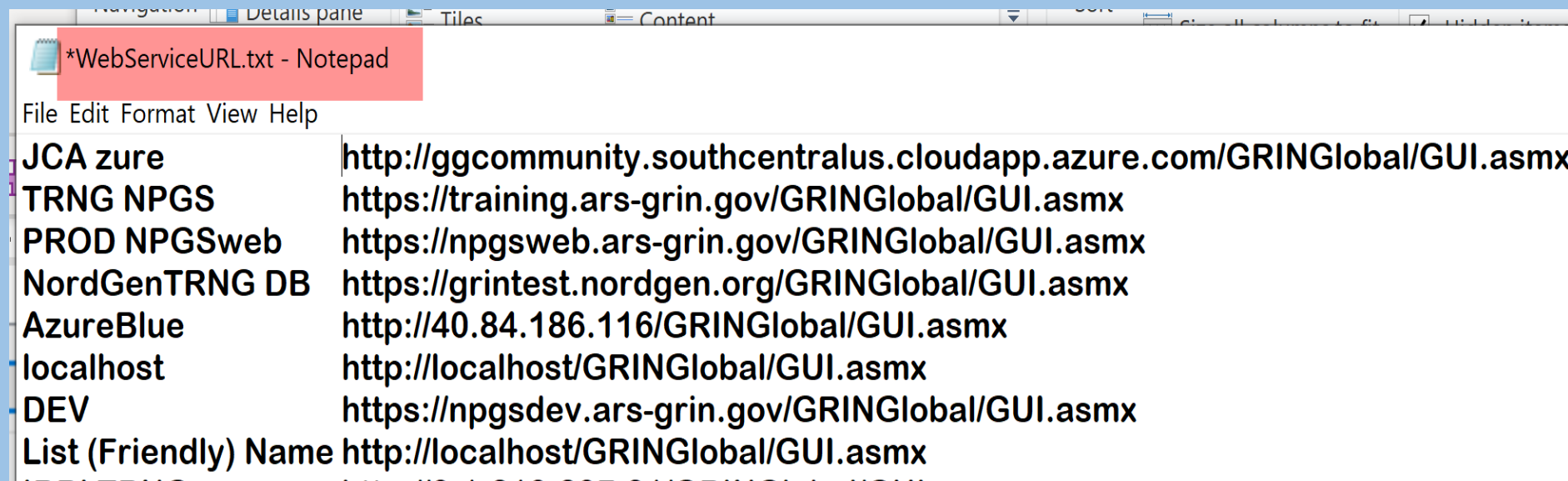
Examples:
grin-global-test1.agron.iastate.edu
ncrpis-arwen.agron.iastate.edu
129.186.234.51
129.186.234.4

Buttons: Add New..., Delete, Move Up, Move Down, Test Server Address, OK, Cancel



Copy file onto each user's PC

(after setting correct connections)



Curator Tool Extensions

- Forms

→ ↓ ↑ This PC > OS (C:) > Program Files > GRIN-Global > GRIN-Global Curator Tool > Forms				
GRIN-Global				
GRIN-Global Curator Tool				
Forms				
Images				
Reports				
Wizards				
<input type="checkbox"/> Name	Date modified	Type	Size	
AccessionForm.dll	3/16/2020 11:27 P...	Application extension	40 KB	
ImageForm.dll	3/16/2020 11:27 P...	Application extension	30 KB	
InventoryForm.dll	3/16/2020 11:27 P...	Application extension	40 KB	
OrderForm.dll	3/16/2020 11:27 P...	Application extension	31 KB	

- Wizards

← → ↓ ↑ This PC > OS (C:) > Program Files > GRIN-Global > GRIN-Global Curator Tool > Wizards				
GRIN-Global				
GRIN-Global Curator Tool				
Forms				
Images				
Reports				
Wizards				
HP				
Image Resizer for Windows				
Intel				
<input type="checkbox"/> Name	Date modified	Type	Size	
AccessionBatchWizard.dll	9/2/2020 3:40 PM	Application extension		
AccessionWizard.dll	3/16/2020 11:27 P...	Application extension		
CooperatorWizard.dll	3/16/2020 11:27 P...	Application extension		
CropTraitWizard_196_41.dull	6/10/2020 9:52 AM	DULL File		
CropTraitWizard_198_31.dull	6/10/2020 10:49 A...	DULL File		
CropTraitWizard_aug05.dll	8/5/2020 11:19 AM	Application extension		
InventoryAttachmentWizard.dll	3/16/2020 11:27 P...	Application extension		
OrderWizard.dll	3/16/2020 11:27 P...	Application extension		
ViabilityWizard.dll	3/16/2020 11:27 P...	Application extension		

GG Public Website

- optional
- requires IIS web server
- runs on any standard browser
- designed *primarily* for external users, but
- staff tool also –
 - with features restricted to staff -
how? - AT Web User – later in this session & in session 6

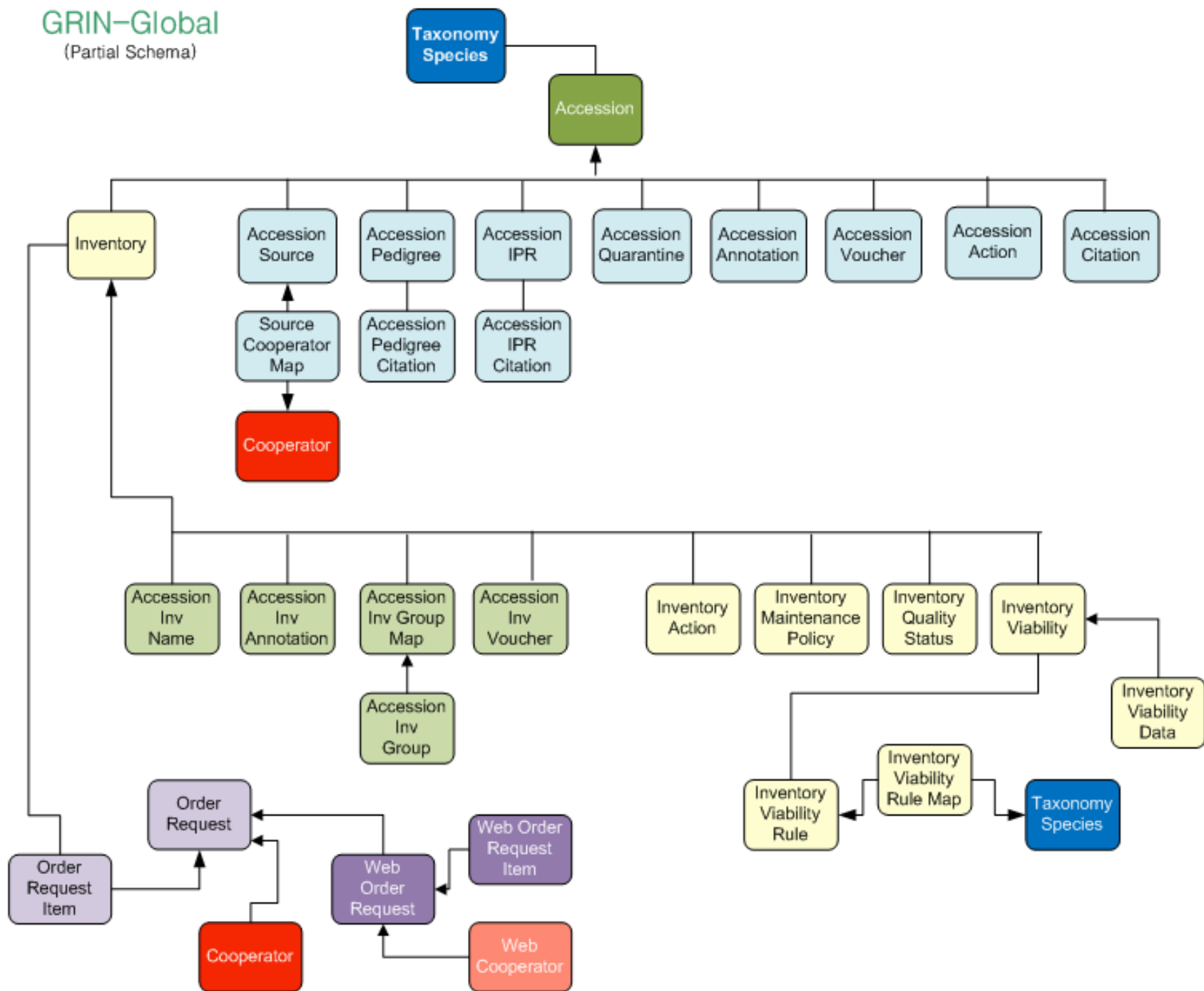
GG Schema

- overview: tables; categories; areas; dataviews
- Naming conventions: IDs, ownership fields
- Parent-child relationships

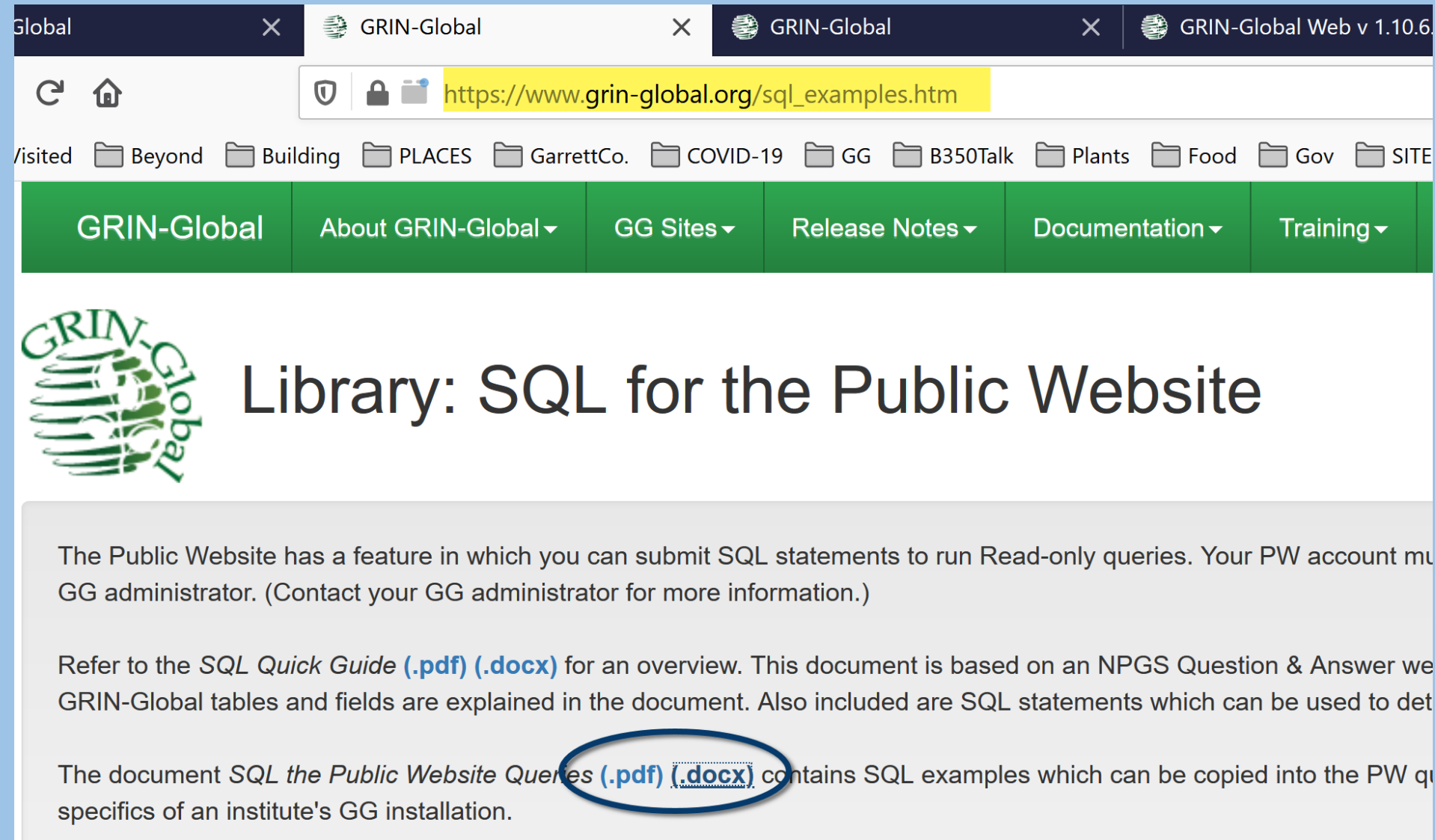


Tables

- a relational database – hundreds of tables
- new tables & fields may be added, but...
- *strongly recommended:*
 - new administrators refrain from changing the schema
 - check with the international GRIN-Global helpdesk



SQL for Generating a Data Dictionary




Global X GRIN-Global X GRIN-Global X GRIN-Global Web v 1.10.6

https://www.grin-global.org/sql_examples.htm

/visited Beyond Building PLACES GarrettCo. COVID-19 GG B350Talk Plants Food Gov SITE

GRIN-Global About GRIN-Global GG Sites Release Notes Documentation Training

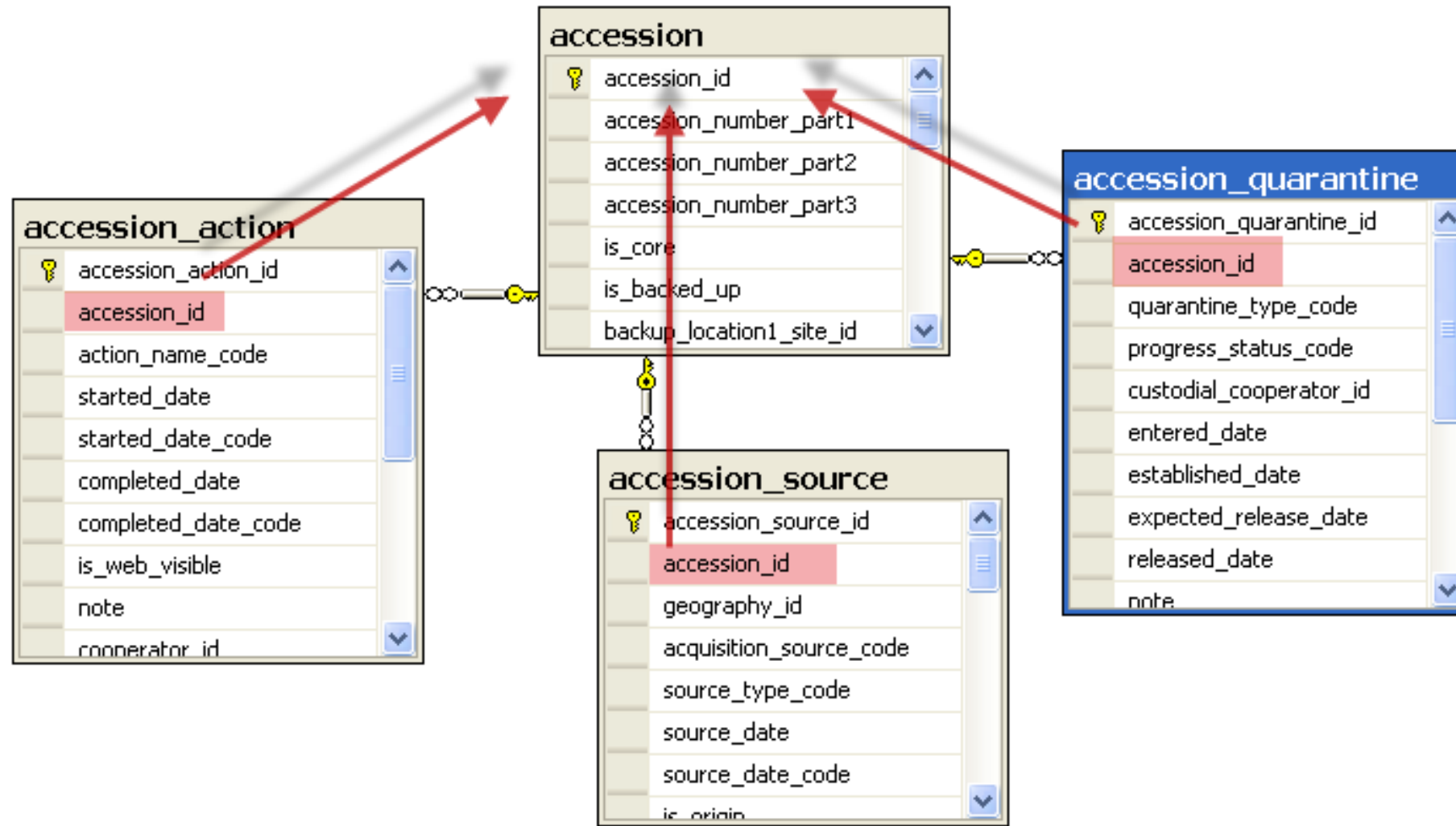
 Library: SQL for the Public Website

The Public Website has a feature in which you can submit SQL statements to run Read-only queries. Your PW account must be approved by a GG administrator. (Contact your GG administrator for more information.)

Refer to the *SQL Quick Guide* ([.pdf](#)) ([.docx](#)) for an overview. This document is based on an NPGS Question & Answer web page. GRIN-Global tables and fields are explained in the document. Also included are SQL statements which can be used to determine the specifics of an institute's GG installation.

The document *SQL the Public Website Queries* ([.pdf](#)) ([.docx](#)) contains SQL examples which can be copied into the PW query.

Accession & a few of its children tables



Tables related logically usually begin with the same word

accession,
accession_action,
accession_source,
etc.

Subordinate records relate to the accession (parent) record by pointing to the accession's Primary Key

Ex: **Names** Records Related to **Parent Accession**

Accession Table

Accession Prefix & Number
("Accession Identifier")

PI 500000

Accession-Inventory Names Table

Accession	Accession Name
-----------	----------------

PI 500000	Purplestraw
------------------	--------------------

PI 500000	CITR 1915
------------------	------------------

PI 500000	CI 1915
------------------	----------------

Naming Conventions...

Prefix

accession_

inventory_

order_request_

taxonomy_

crop_

web_

sys_ and app_

Tables

Accession

Inventory

Order

Taxonomy

Crop

Public Website

GRIN-Global System



Naming Conventions... continued...

- first field is the primary key field ...*table_id*

accession_id

- every record has 6 audit fields



Ownership

- records exist in `sys_table_relationship` that define “ownership” relationships with the parent tables
- the basic ownership model is that anyone can create a record in any table and they become the owner (more in session 5, Security)

SQL for displaying the 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'
```

What is a Dataview?

What is a Dataview?

- a stored SQL procedure (a query) with some peripheral information

Dataview SQL example

SELECT

```
distinct a.accession_id, a.doi, a.accession_number_part1,  
a.accession_number_part2,  
a.accession_number_part3, a.taxonomy_species_id,  
(select min(plant_name) from accession_inv_name an, inventory i where  
i.inventory_id = an.inventory_id and i.accession_id = a.accession_id and  
plant_name_rank = (select MIN(plant_name_rank) from accession_inv_name  
an2, inventory i2 where an2.inventory_id = i2.inventory_id and i2.accession_id =  
a.accession_id)) AS plant_name,  
(select s.geography_id from accession_source s where a.accession_id =  
s.accession_id and s.accession_source_id = (select MIN(s2.accession_source_id)  
from accession_source s2 where a.accession_id = s2.accession_id and is_origin =  
'Y')) AS geography_id,  
(select s.site_id from site s where s.site_id in (select c.site_id from cooperator c
```

What is a Dataview?

Component	Description
SQL Query Definitions	The SQL statement for each supported database engine
SQL Parameter Definitions	Passes user-specified values to the SQL queries at run time
Field Mappings	Associates a dataview field with a specific table and column in the database
Language Information	Provides language-specific Titles and Descriptions for column headings displayed in applications
Flags and Settings	Denotes if the dataview is read only, user visible, etc.

How do you make changes to a...

- table?

- dataview?

How do you make changes to a...

- table?

Use the database management tool (SSMS)
(Session 3)

- dataview?

Use the AT Dataview editor edit dataviews
(Sessions 2 & 3)

SQL Server Management Studio

The screenshot displays the SQL Server Management Studio interface. On the left, the Object Explorer shows the database structure for 'DESKTOP-35RLT23\SQLEXPRESS (SQL Server 12.0.4522 - DESKTOP-35RLT23)'. The 'Databases' folder is expanded, showing 'System Databases', 'gg1102', 'gg191', and 'gringlobal'. The 'gringlobal' database is selected, and its 'Tables' folder is expanded, showing 'System Tables', 'FileTables', and 'dbo.accession'. The 'dbo.accession' table is selected, and its 'Columns' folder is expanded, showing columns like 'accession_id (PK, int, not null)', 'doi (nvarchar(20), null)', 'accession_number_part1 (nvarchar(10), not null)', 'accession_number_part2 (int, null)', 'accession_number_part3 (nvarchar(10), not null)', 'is_core (nvarchar(1), not null)', 'is_backed_up (nvarchar(1), not null)', 'backup_location1_site_id (FK, int, not null)', and 'backup_location2_site_id (FK, int, not null)'. A green callout bubble points to the 'dbo.accession' table with the text 'right-click; Select Top 1000 Rows'. A context menu is open over the 'dbo.accession' table, showing options like 'Table...', 'Design', 'Select Top 1000 Rows' (highlighted in red), 'Edit Top 200 Rows', 'Script Table as...', 'View Dependencies', 'Full-Text index', 'Policies', 'Facets', 'Start PowerShell', and 'Reports...'. The main query editor shows a SQL query:

```
SELECT TOP 1000 [accession_id]
,[doi]
,[accession_number_part1]
,[accession_number_part2]
,[accession_number_part3]
,[is_core]
,[is_backed_up]
,[backup_location1_site_id]
,[backup_location2_site_id]
,[status_code]
,[life_form_code]
,[improvement_status_code]
,[reproductive_uniformity_code]
,[initial_received_form_code]
```

 The 'Results' tab is active, showing the first 6 rows of the query results. The 'Messages' tab is also visible. The 'Results' tab shows a table with 8 columns: 'accession_id', 'doi', 'accession_number_part1', 'accession_number_part2', 'accession_number_part3', 'is_core', and 'is_backed_up'. The first 6 rows are displayed, with the first row having 'accession_id' 1, 'doi' NULL, 'accession_number_part1' BRA, 'accession_number_part2' 16, 'accession_number_part3' NULL, 'is_core' N, and 'is_backed_up' N.

right-click;
Select Top 1000
Rows

Table...
Design
Select Top 1000 Rows
Edit Top 200 Rows
Script Table as
View Dependencies
Full-Text index
Policies
Facets
Start PowerShell
Reports...

SQLQuery5.sql - DE...-35RLT23\mar (55)) X SQLQuery4.sql - DE...-35RLT23\mar (64)) SQLQuery3.sql - DE...-35RLT23\mar (65))

```
SELECT TOP 1000 [accession_id]
,[doi]
,[accession_number_part1]
,[accession_number_part2]
,[accession_number_part3]
,[is_core]
,[is_backed_up]
,[backup_location1_site_id]
,[backup_location2_site_id]
,[status_code]
,[life_form_code]
,[improvement_status_code]
,[reproductive_uniformity_code]
,[initial_received_form_code]
```

100 %

Results Messages

	accession_id	doi	accession_number_part1	accession_number_part2	accession_number_part3	is_core	is_backed_up
1	1	NULL	BRA	16	NULL	N	N
2	2	NULL	BRA	18	NULL	Y	N
3	3	NULL	BRA	19	NULL	N	N
4	4	NULL	BRA	20	NULL	N	N
5	5	NULL	BRA	21	NULL	N	N
6	6	NULL	BRA	22	NULL	N	N

AT – Partial dataview list

GRIN-Global Admin v 1.10.6.0 - [Dataviews - localhost\sqlexpress]

File View Tools Help

Connections

- localhost\sqlexpress - sqlserve
 - Groups
 - Users
 - Permissions
 - Dataviews
 - Client**
 - CT Wizards
 - Exports
 - Import Wizard
 - Lookups
 - Reports
 - Search
 - System
 - Web Application

localhost\sqlexpress - sqlserver > [Dataviews](#) > [Client](#)

Name	Title	Category	Database Area
get_accession	Get Accession	Client	Accession
get_accession_2017jul03	Get Accession	Client	Accession
get_accession_action	Get Accession Action	Client	Accession
get_accession_backup	Get Accession	Client	Accession
get_accession_backup2	Get Accession	Client	Accession
get_accession_backup2...	Get Accession Demo	Client	Accession
get_accession_bck	Get Accession	Client	Accession
get_accession_citation	Get Accession Citation	Client	Accession
get_accession_demode...	Get Accession	Client	Accession
get_accession_inv_ann...	Get Accession Inventory Annotation	Client	Accession/Inve...
get_accession_inv_attach	Get Accession Inventory Attach	Client	Accession/Inve...
get_accession_inv_group	Get Accession Inventory Group	Client	Accession/Inve...

A GG Build (Installation) provides Pre-Populated Tables

- Sites
- Codes
- Geography
- Cooperator
- Taxonomy

Site Table

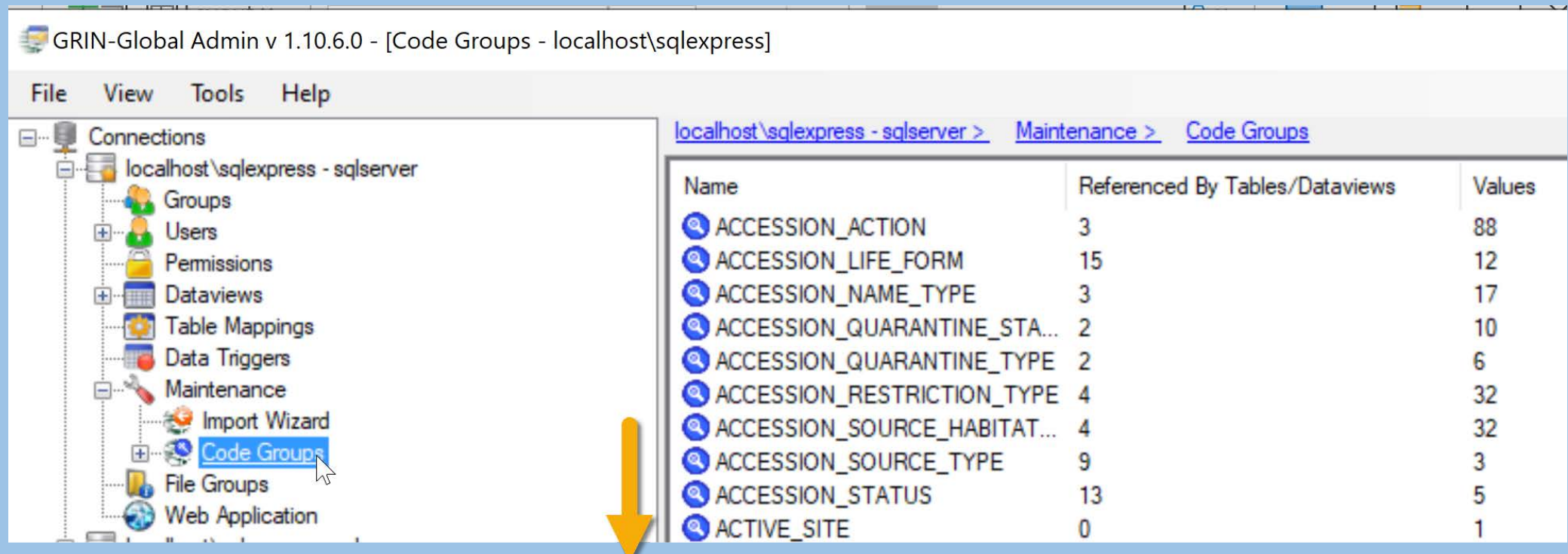
- Build includes the SYS site – required!

Site ID	Site Short Name	Site Long Name	Provider Identifier	Organization Abbreviation
1	SYS	SYSTEM		

- An organization creates sites for physical locations or virtual reasons

Codes

- Should be configured by DBA *before* the organization starts using GG
- use the AT to add/ edit Code Groups & Codes (Session4)



GRIN-Global Admin v 1.10.6.0 - [Code Groups - localhost\sqlexpress]

File View Tools Help

Connections

- localhost\sqlexpress - sqlserver
 - Groups
 - Users
 - Permissions
 - Dataviews
 - Table Mappings
 - Data Triggers
 - Maintenance
 - Import Wizard
 - Code Groups**
 - File Groups
 - Web Application

localhost\sqlexpress - sqlserver > Maintenance > Code Groups

Name	Referenced By Tables/Dataviews	Values
ACCESSION_ACTION	3	88
ACCESSION_LIFE_FORM	15	12
ACCESSION_NAME_TYPE	3	17
ACCESSION_QUARANTINE_STA...	2	10
ACCESSION_QUARANTINE_TYPE	2	6
ACCESSION_RESTRICTION_TYPE	4	32
ACCESSION_SOURCE_HABITAT...	4	32
ACCESSION_SOURCE_TYPE	9	3
ACCESSION_STATUS	13	5
ACTIVE_SITE	0	1

Geography

- Default geography data can (should!) be downloaded during installation

Cooperator

- default cooperators installed

- administrator
- guest
- fbowner
- fbsubmitter



Do not
delete!

- additional cooperators installed with Taxonomy

Cooperators ...continued...

- Can be a person
or an organization
- CT users are cooperators added via the Admin Tool

Cooperators ...continued...

- Can be a person
or an organization (last name is **null**)
- CT users are cooperators added via the AT

Finally...

- Introduction to the Admin Tool

The AT's initial screen requires two logins:

Authenticate against the ...

1. database engine
2. security records within GG itself... user must be in **Administrators Group**

GRIN-Global Admin v 1.10.6.0 - [localhost\sqlexpress]

File View Tools Help

Connections

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

localhost\sqlexpress - sqlserver >

To administer GRIN-Global, a valid database connection is required.

Database Web Application

Database Connection

Engine: SQL Server 2014 or later

Server: localhost\sqlexpress

DB Name: gringlobal

☒ Use Windows Authentication

User Name:

Password:

☐ Remember Password

To test connection, a valid GRIN-Global login is required below.

Test Connection

GRIN-Global Login

User Name: administrator

Password:

☒ Remember Password

Save

AT Initial Screen Settings

Server

server name that hosts the database engine. SQL Server expects an “instance name”

[localhost\sqlexpress - sqlserver >](#)

To administer GRIN-Global, a valid database connection is required.

Database Web Application

Database Connection

Engine: SQL Server 2014 or later

Server: localhost\sqlexpress

DB Name: gringlobal

User Name: localhost\sqlexpress

Password:

Database Connection

Engine: SQL Server 2014 or later

Server: ggcommunity.southcentralus.cloudapp.azure.com,1433

DB Name: gringlobal

☐ Use Windows Authentication

User Name: GC

Password:

☒ Remember Password

To test connection, a valid GRIN-Global login is required below.

Test Connection

GRIN-Global Login

User Name:

Password:

☒ Remember Password

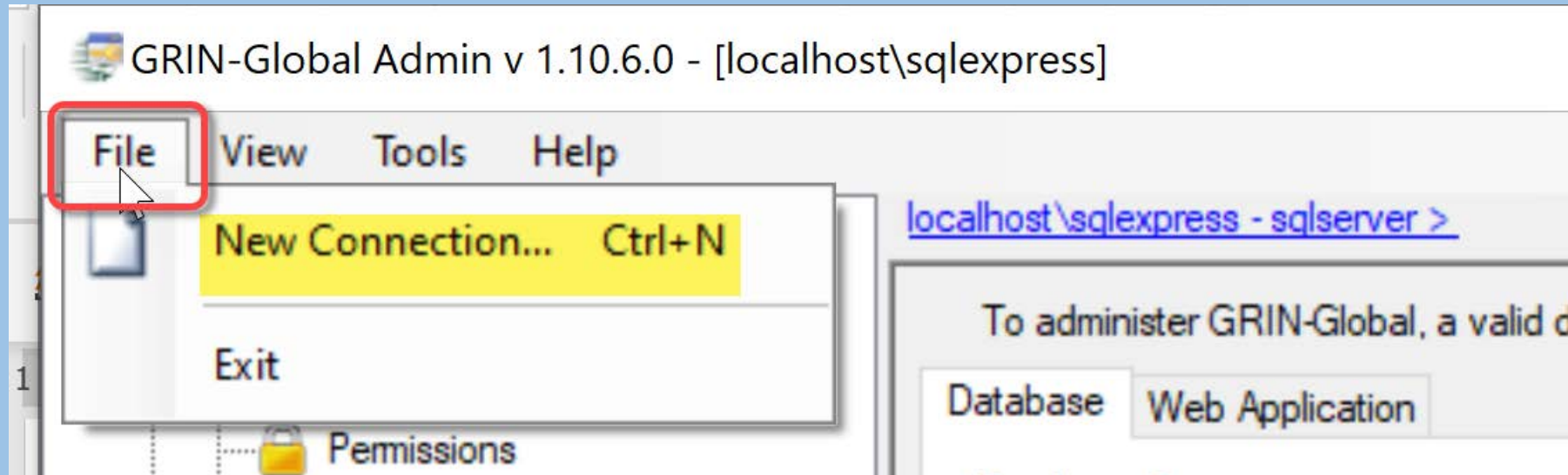
Save

shh! **GRIN-Global Login**

- administrator /
- administrator

AT Menu

don't worry about it



...except when more than one GG database

GG Admin Tool Rule #1

- When unsure, right-click!



Created by Icon Island
from Noun Project

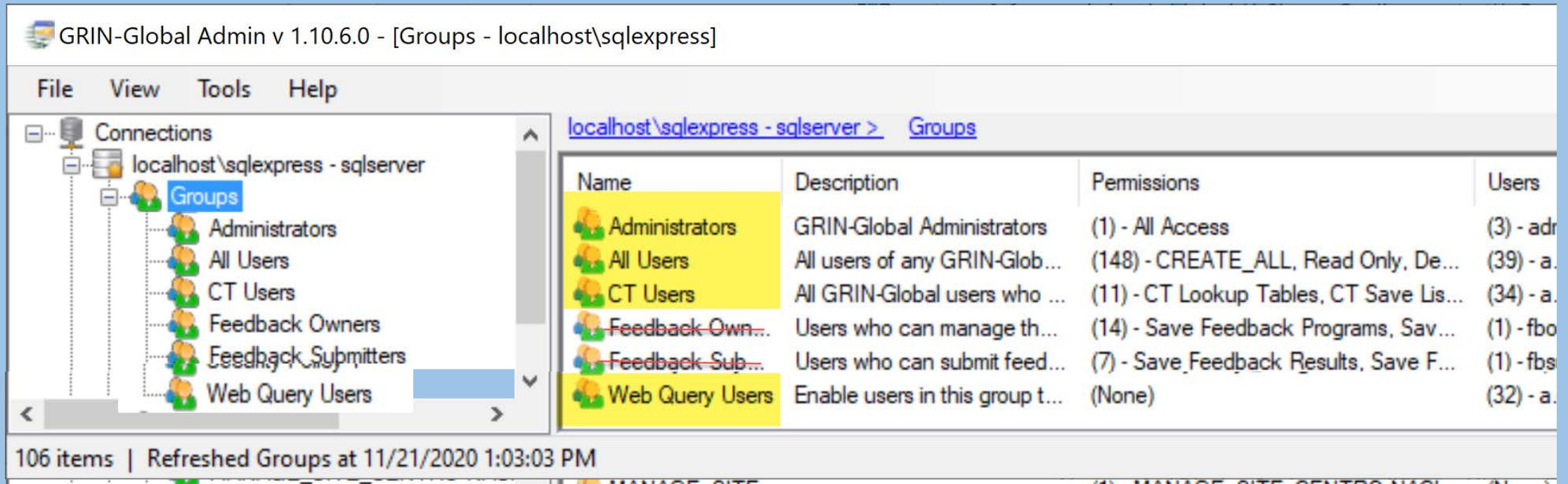
Adding CT Users

Establish/select the following:

- User Name and Password
- Geography and Site codes
- Enabled (checkbox – denotes the user will be a CT user)
- Active (checkbox – indicates the user will be an active cooperator)
- Groups: Add all CT Users to the CT Users Group

Adding CT Users

- Groups



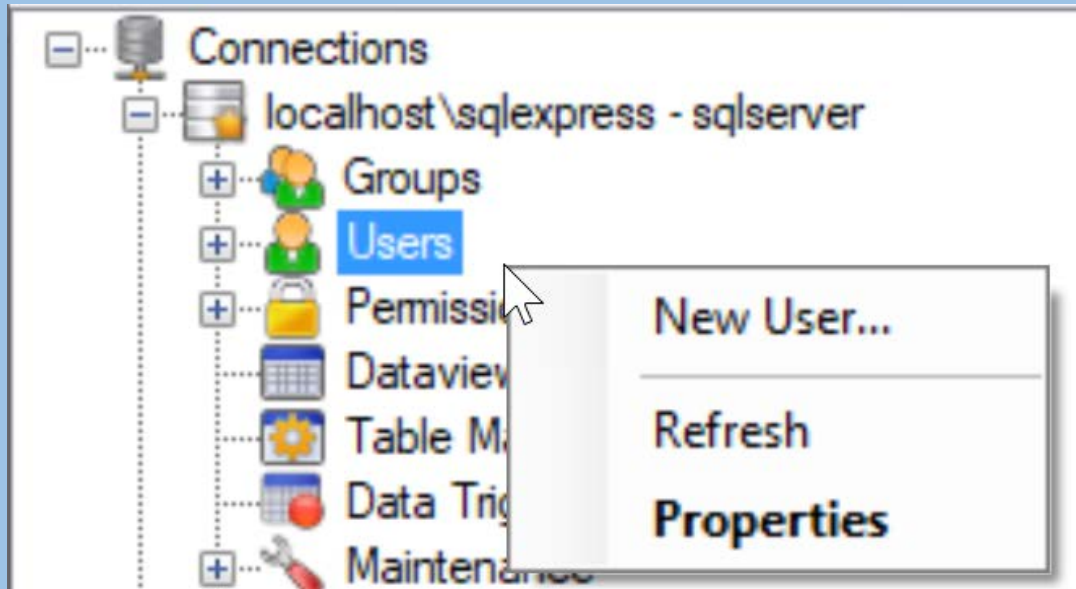
The screenshot shows the GRIN-Global Admin v 1.10.6.0 interface. The title bar indicates the current view is [Groups - localhost\sqlexpress]. The interface includes a menu bar (File, View, Tools, Help) and a tree view on the left showing the hierarchy of groups under localhost\sqlexpress - sqlserver. The 'Groups' folder is expanded, showing sub-groups: Administrators, All Users, CT Users, Feedback Owners, Feedback Submitters, and Web Query Users. The 'CT Users' group is selected. The main pane displays a table of group details for localhost\sqlexpress - sqlserver > Groups.

Name	Description	Permissions	Users
Administrators	GRIN-Global Administrators	(1) - All Access	(3) - adr
All Users	All users of any GRIN-Glob...	(148) - CREATE_ALL, Read Only, De...	(39) - a.
CT Users	All GRIN-Global users who ...	(11) - CT Lookup Tables, CT Save Lis...	(34) - a.
Feedback Own...	Users who can manage th...	(14) - Save Feedback Programs, Sav...	(1) - fbo
Feedback Sub...	Users who can submit feed...	(7) - Save_Feedback_R <u>e</u> sults, Save F...	(1) - fbs
Web Query Users	Enable users in this group t...	(None)	(32) - a.

106 items | Refreshed Groups at 11/21/2020 1:03:03 PM

(More on Groups & Permissions in Session 5)

Adding CT Users



Adding CT Users...

Must complete...

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

User Users - localhost\sqlexpress

General Permissions Groups

User Name: Set Password... Password must be set before saving 1

☒ Enabled

Cooperator Information

General Web Login Contact Info Geographic Notes

Current Cooperator is (none) Search...

Title: First Name: Last Name:

Full Name (for display):

Job: Discipline:

Organization: Organization Abbreviation:

Language: ☐ Active 2

Save Cancel

Adding CT Users

- Alternative: start by searching for existing cooperator records

User Users - localhost\squlexpress

General Permissions Groups

User Name:
 Set Password... Password must be set before saving

☒ Enabled

Cooperator Information

General Web Login Contact Info Geographic Notes

Current Cooperator is (none)

Title: First Name: Last Name:

Full Name (for display):

PW Users

- public PW users self-register
- internal staff can / should have their CT User account tied to their Web (PW) Login account
 - adds Tools to their PW menu
 - internal PW reports will be displayed
 - add to the **Web Query** Group

(A web.config workaround will be explained in session 6)

Updater Program

Critical step to take before running the Updater...

Updater Program

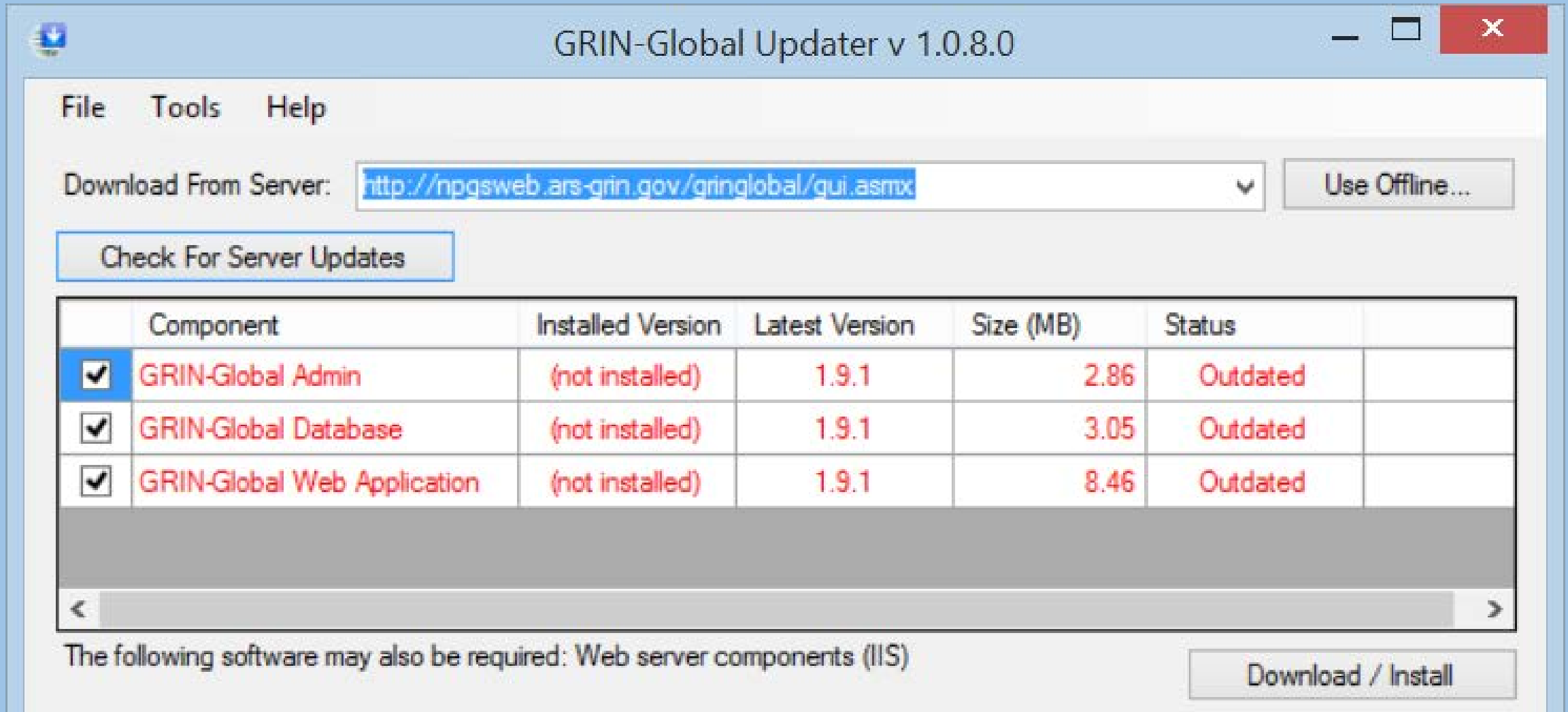
Critical step to take before running the Updater



Backup your
database

Updater Program

for installing the server components



GRIN-Global Updater v 1.0.8.0

File Tools Help

Download From Server: <http://npgsweb.ars-grin.gov/gringlobal/gui.aspx> Use Offline...

Check For Server Updates

	Component	Installed Version	Latest Version	Size (MB)	Status	
<input checked="" type="checkbox"/>	GRIN-Global Admin	(not installed)	1.9.1	2.86	Outdated	
<input checked="" type="checkbox"/>	GRIN-Global Database	(not installed)	1.9.1	3.05	Outdated	
<input checked="" type="checkbox"/>	GRIN-Global Web Application	(not installed)	1.9.1	8.46	Outdated	

< >

The following software may also be required: Web server components (IIS)

Download / Install

Updater

- #1 Rule:

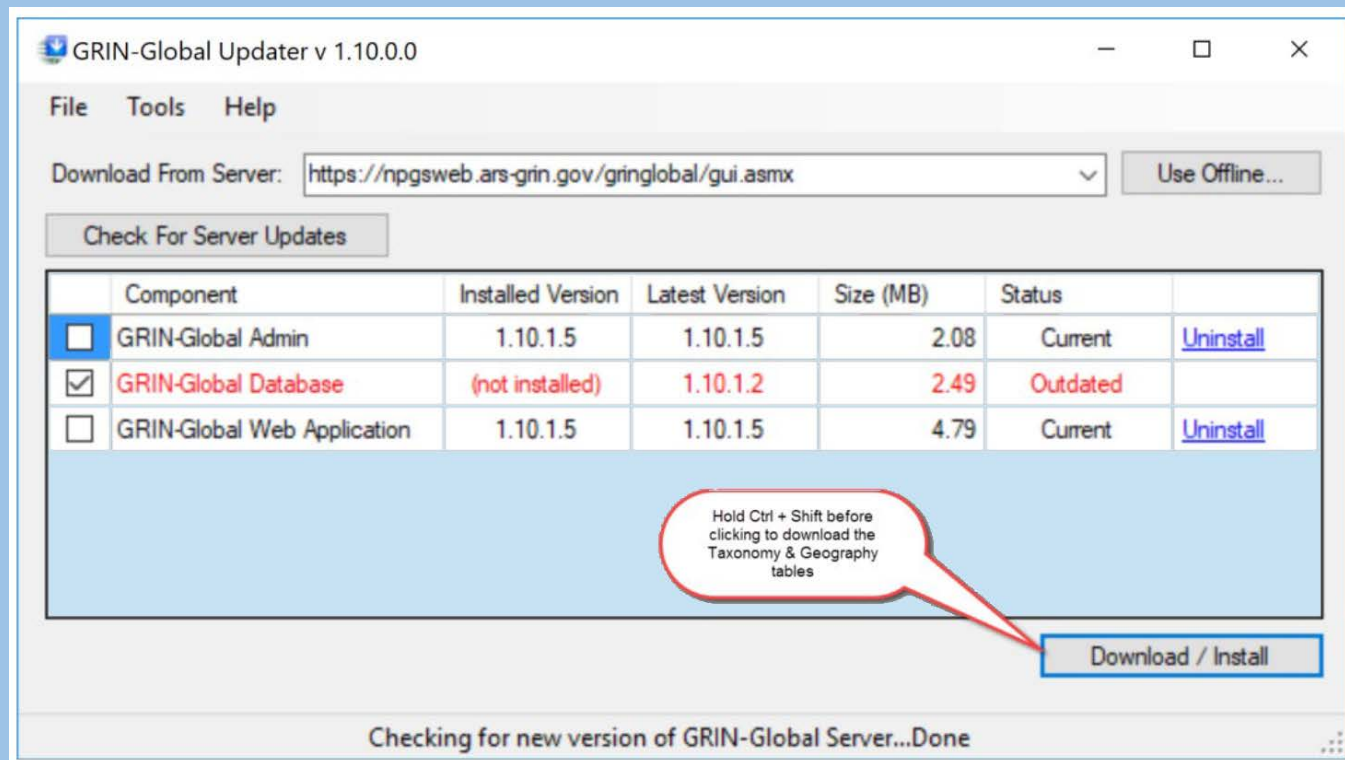
Updater

- #1 Rule: Follow the Installation Guide

Updater

Documentation & links available from the GG Project Site

https://www.grin-global.org/docs/gg_server_install.pdf



Download the
Taxonomy &
Geography
tables

Questions?

Homework!

- Download Homework Exercise 1:
https://rrginc.com/documents/gg_AT_exer01.pdf
- Download PowerPoint Presentation:
https://rrginc.com/documents/gg_AT_pres01.pdf

Marty Reisinger

- mar@rrginc.com
- 410 790 8649
- Skype: live:mar_3510