SASEG 0 Exercise – Accessing UA Resources SAS Enterprise Guide and Enterprise Miner Fundamentals - Getting Started

Paul Cronan, Michael Gibbs, and Ron Freeze

(Fall 2017)

Sources (adapted with permission) -T. P. Cronan, Michael Gibbs, Jeff Mullins, and David E. Douglas Course and Classroom Notes Enterprise Systems, Sam M. Walton College of Business, University of Arkansas, Fayetteville Microsoft Enterprise Consortium IBM Academic Initiative SAS[®] Multivariate Statistics Course Notes & Workshop, 2010 SAS[®] Advanced Business Analytics Course Notes & Workshop, 2010 Microsoft[®] Notes Teradata[®] University Network

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1.VMWare – Accessing UA Resources

1.1. Instructions to access virtual desktop infrastructure:

• **Open a browser and go to:** <u>https://waltonlab.uark.edu</u> (Firefox: Click "I understand the risks", "Add Exception", and "Confirm Security Exception". For IE, simply "Continue")

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Click "Install VMWare Horizon Client for Windows"

C n https://waitonlab.uark.edu			
Willware Honzon			
You can connect to your desktop and appl The VMware Horizon Client offers better p	cations by using the VMware Horizon Client or through the brow erformance and features.	rser	
	Install VMware Horizon Client	VMware Horizon HTML Access	
To see the full list of VM/ware Horizon Clie	nts, click <u>born</u>		
For help with VMware Horizon, click here.			

- Select the VM Client that corresponds to the machine you are using (Mac, Windows, IPad, etc.) by clicking on the **Product Downloads** tab (Note: For iPad users, it might be better to use the App Store, Search for VMWare)
- Click "Go to Downloads"

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		,	View My Download History		
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4.0	 VMware Horizon Clients for Windows, Mac, IOS, Linux, and Android allow you to connect to your VMware Horizon virtual desktop from your device of choice giving you on-the-go 	t o	Documentation		
_	access from any location.		VMware View Mobile Client Privacy		
	Read More		Horizon View Community		
			How to get the Horizon (with View) Client fo Linux		
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	VMware Horizon Client for 32-bit Linux	2016-09-15	Go to Downloads		
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Download VMware Horizon Client for 64-bit Windows

The VMware Horizon Client for 64-bit Windows

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Product Binaries

Select Version

Туре

Description The VMware Release Date 2016-09-15

Product Resources

View My Download History Product Info Documentation VMware View Mobile Client Privacy Horizon View Community How to get the Horizon (with View) Client fo r Linux



- Click **download**, and run the executable that is downloaded (In the case of Firefox, Save File, and then run)
- leave the "Typical" option checked and click on "I Agree & Install"

WMware Horizon Client Setup - □	×
Install VMware Horizon Client Choose your product settings	÷
VMWARE END USER LICENSE AGREEMENT	^
PLEASE NOTE THAT THE TERMS OF THIS END USE LICENSE AGREEMENT SHALL GOVERN YOUR USE OF THE SOFTWARE. REGARDLESS OF ANY TERMS	R
Choose the type of installation	
Typical (below are the current settings) Internet Protocol: IPv4 FIPS Cryptography: Not available on this machine Included Features: USB, Log in as current user	
○ Customize	
Print I Agree & I	nstall

• Click Finish

😸 VMware Horizon Client Set	tup	-		\times
vm ware [.]	Completed the VMware Hor Wizard	izon Clie	nt Setu	p
VMware Horizon ™ Client	Click the Finish button to exit the Se	tup Wizaro	d.	
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• Click **Yes** to restart the computer

😸 VMware Horizon Client Setup							
i	You must restart your system for the configuration changes made to VMware Horizon Client to take effect. Click Yes to restart now or No if you plan to manually restart later.						
	Yes No						

1.2 Run the VMWare Horizon Client



• Double-Click on Add Server



• Enter the name of the connection server as "waltonlab.uark.edu"



• Type in your user UARK name, password, and select Domain: GACL

🕶 Login	_		×
vmware Horizor	n		PCoIP.
Server:	🏠 https://waltonlab.uark.edu		
User name:	aadsouza		
Password:	•••••		
Domain:	GACL	\sim	
	Login	(Cancel

• (<u>OPTIONAL</u>) Select the system you wish to connect to, and click Connect. NOTE: For most students, you will bypass this step and will automatically be connected to the desktop image for which you have been assigned.)





2.SAS Enterprise Guide 7.1 Basics

2.1. Logging onto the SAS platform via SAS Enterprise Guide 7.1

• Double-Click SAS Enterprise Guide 7.1



- If the icon does not exist on the desktop
- Go to Windows →All Apps → Scroll down to the SAS Drop down → Scroll down to SAS Enterprise Guide 7.1 (64-bit)
- The Application will normally pass through your credentials for authentication.
- the screen below is the standard splash screen that can be used to select a task. If closed, a New Project will be created by default. For this example, select New Project



- you will need to Set Default Profile at the first login:
 - Click on the profile link ("No profile selected") on the bottom right corner
 - Click on profiles and click on Add
 - Enter details as follows
 - 1. Name: <any name for your profile>
 - 2. Server: sasms.walton.uark.edu (remote)
 - 3. Port: 8561
 - 4. Username: <your UARK username>
 - 5. Domain: GACL
 - Select newly created profile and set as active.
- Once your profile loads, browse to Servers > SASApp

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• Provide credentials when prompted for, as seen below

Credentials	Required X
Server SASApp	
User:	aadsouza
Password:	••••••
	OK Cancel

 >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	Γ

- In the Server List pane, Expand Servers→SASApp→Libraries.
- Ensure that you can expand libraries and see data as below:



Libraries are simply "pointers" in the metadata that point to a physical location on the server or another system where data can be read or written to. In the case of your library (i.e. mtg002), data can both be read from and written to this location. However, other libraries, such as TeradataHallux, point to the UA_HALLUX database on the Teradata platform, and are explicitly read only.

2.2. Creating and saving a project SAS Enterprise Guide 7.1

• Expand the TeradataHallux Library



• Double click on the "Customer_Profile" dataset

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		2	101794	1379	27581	541632	240CT1966 F	
		3	105466	1204	24083	525206	23MAY1941 F	
		4	105262	1063	21261	467227	25SEP1953 F	
		5	103672	1378	27562	464431	14SEP1954 M	
		6	107462	1116	25863	440946	16JUL1950 M	
		7	107424	1311	22827	536103	24FEB1971 F	
		8	101266	1062	21240	504832	10FEB1942 F	
		9	100124	1054	21887	417204	04N0V1976 F	
		10	102326	1232	20824	440891	15N0V1948 F	
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	🚺 Album	19	102000	1110	22206	413668	28JUL1938 M	
	Band	20	109586	1074	21481	425728	27SEP1953 F	
	Contract	21	104202	1268	25360	448415	27MAR1945 M	
	Customer	22	108198	1193	23862	462824	01NOV1946 F	
	Lustomer_Genre	23	104730	1164	22962	552124	28FEB1960 M	
	Customer_Profile	24	104080	1009	20187	526809	290CT1974 M	
	ueriie Instrument	25	107628	1170	22921	503691	230CT1964 M	
	ltem	26	100856	1225	24504	416403	16JAN1965 M	
	Item Tune	27	108566	1041	20825	531624	30MAY1972 F	
	Member Instrument	28	106648	1238	21763	521213	27SEP1957 F	
	Order Detail	29	103876	1121	22421	551710	21JUL1948 F	
	Order_Header	30	108158	1183	23660	543662	30MAY1966 F	
	Order_Source	31	107382	1385	27705	466411	26FEB1950 F	
	Performance	32	101264	1323	26461	429648	18DEC1968 F	
	Person	33	108606	1103	22065	512003	20JAN1974 M	
	Producer	34	104528	1172	23441	516102	29JUN1949 M	
	📜 Song 🚬 🚬	35	109382	1252	24320	546802	29JUN1949 M	

• This dataset is now part of your SAS project. Now, let's create a few graphs to show favorite bands, sorted my gender. Select Graph-Bar Chart



• Double-Click "Vertical Color Bar"



• Drag **"Favorite_Band"** to the empty **"Column to Chart"** box, and drag **"Gender"** onto the **"Group charts by"** box

Bar Chart for SASApp:Ter Bar Chart Data	adataHallux.Customer_Profile Data	
Appearance Bars Layout Axes General	Data source: SASApp:TeradataHallux.Customer_Profile Task filter: None Edit	
Horizontal Axis Axis Vertical Axis Axis Major Ticks Minor Ticks Reference Lines Chart Area Advanced Titles Properties	Columns to assign: Name Profile_ID Provite_Band Favorite_Album Favorite_Song Birthdate Gender Gender Column to chart (Limit: 1) Group charts by Gender Gender Column to chart (Limit: 1) Group charts by Gender Column to chart (Limit: 1) Group charts by Gender	
	Specifies the sort order for each variable.	<u>-</u>
Preview code	Run 🔻 Save Cancel Help	

• Click **Run.** You should now see the graphs you requested (Scroll down to see the band code distribution for males)



Return to the Process Flow view



• Click on File → Save Project



• Click on SAS Folders

Deskton	Name	Description	Туре	Created
- comop	SYS 5713 Shared	1	Folder	4/18/2012 4:22:49
👌 My Documents 👘	ISYS 5713 Studer	nts	Folder	4/18/2012 4:24:04
	My Folder		Folder	4/11/2012 11:34:
🚽 My Computer	Products	Reserved for content delivered with SAS pr	Folder	4/9/2012 2:31:50
My Network Places	Shared Data	Folder for shared libraries, tables, cubes, an	Folder	4/9/2012 2:31:50
Servers				
	•]
	File name:	oject		•
	_			

• Double Click **"My Folder"**→Give your project a name and click **Save.** Your project is now saved on the SAS platform, and can be retrieved at any time in any location where the SAS platform (SAS EG) is accessible. You can also save your project to a network share drive (i.e. S: drive) as a backup.



• To see your work, simply close out SAS Enterprise Guide, re-launch SAS EG (notice that you were not prompted for a login/password), and select **Open→Project**



• Select SAS Folders, Double-Click My Folder, and select your project

Copen Project	_		×		
Browse Search SAS Folders					
Look in: 📄 SAS Folders - 🗸 🎓 🕅 🔻 🌖					
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Files of type: Enterprise Guide Project Files			\sim		
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• You can now see the Process Flow view of your project, and make changes/modifications as needed

SAS Enterprise Guide - Favorite Bands by Gender.egp					
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• File > Exit then Start > Logoff

3.SAS Enterprise Miner – Getting Started

3.1. Connecting to a Data Source

- 1. Using SAS Enterprise Miner Client 14.1 from the Start Menu in VMware
- 2. Log in with your UARK username and Password
- 3. Select New Project
- 4. Select Next
- 5. Name your Project:
 - a. <Last Name>_Table_Example
 - b. Freeze_Table_Example
- 6. Select Next
- Accept the default SAS Folder Location by selecting Next
- 8. Select Finish



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	SAS° Enterprise Miner™ 14.1					
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Copyright © 201	5, SAS Institute Inc., Cary, NC, USA. All Rights Reserved					
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	Default SAS Environment					
Use Integrated	Windows authentication (single sign-on) 🌔					
User ID:	rfreeze					
Password:	•••••					
Remember password						
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Note the different sections of the Enterprise Miner Work area.

- Main Menu
- Toolbar commonly used tasks (modifiable
- Tasks Tree
- Context Sensitive Toolbar
- SEMMA tabs (Sample, Explore, Modify, Model and Assess)
- Properties List
- Context Sensitive Toolbar
- Project Start Code
- Modeling Diagram Workspace Greyed out until a new diagram is created



3.2. Linking a SAS Data Source to our project

We now need to link a data source to our project.

- 9. Select File->New->Data Source
- 10. Select Next (Step 1 of 8)
- 11. Select Browse (Step 2 of 8)
 - a. Navigate to your course number (SAS Libraries->ISYS xxxx)
 - b. Select Pva97nk
 - c. Select OK
- 12. Select Next (Step 2 of 8)

- 13. (Step 3 of 8) shows the Table Properties Select Next
- 14. (Step 4 of 8) shows the Metadata Advisor Options we will use the Basic options Select Next
- 15. (Step 5 of 8) shows the Column Metadata Select Next
- 16. (Step 6 of 8) allows you to create a Sample data set This is useful for very large datasets – Do not create a sample data set – Make sure No is selected – Select Next
- 17. (Step 7 of 8) accept the defaults for the Data Source Attributes Select Next
- 18. (Step 8 of 8) Review the Summary Select Finish

You now have connected a SAS Data Source to your project. Select the plus (+) signs in the	Enterprise Miner - Freez File Edit View Actions Op	e_Table_Example trions Window Help 📺 🍳 🖙 🛠 🔳 🐮 🚱 🖶	Image: Sample Explore Modify Model Assess Utility HPDM Applications Text Mining Time Series	-	×
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which you are	Grid Available Path Metadata Folder Path	No D:\EMProjects\rfreeze\Freeze_ /User Folders/Ron Freeze/Mv F			
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Open Model Package

🔣 Enterprise Miner - Freeze_Table_Example File Edit View Actions Options Window Help Project... Ctrl+Shift+P New Reg Diagram... Ctrl+Shift+D Open Project... Ctrl+O Data Source... Ctrl+Shift+S **Recent Projects** Library... Ctrl+Shift+L Open Model Ctrl+G

Ctrl+ Alt+ M