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# **SAS Enterprise Guide 4.2 for Programmers**

March 5<sup>th</sup>, 2010

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**Presented by:**

**Rupinder Dhillon  
Dhillon Consulting Inc.**



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# **SAS Enterprise Guide 4.2 for **NON** Programmers**

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# **SAS Enterprise Guide 4.2 for Everyone**

March 5<sup>th</sup>, 2010

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**Rupinder Dhillon  
Dhillon Consulting Inc.**

**Your BI framework is in place  
– how do you get your Data to your users?**

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With the Business Intelligence Platform architecture in place, how do you ensure the data will actually be used to make better informed business decisions?

- Are the right users getting the right data?
- Are they able to access data in a timely manner?
- Do they have the right tools to perform their business functions

## Who are your Data Consumers?

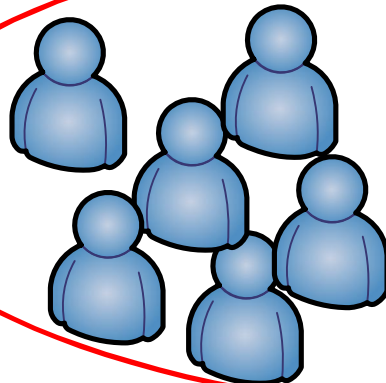
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Senior Executive/Management

- Dashboards
- High Level Reports

**Power Users**

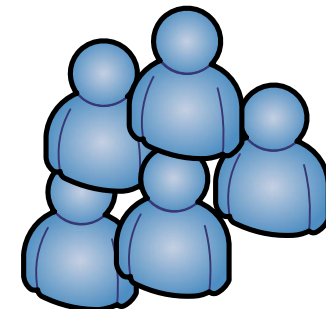


Analysts, Modelers, Business Users

- Querying and Reporting
- Detailed Data Exploration and Analysis
- Modeling and Scorecarding
- Advanced Analytics

Casual Users

- Basic Querying and Reporting
- Consumers of pre-defined reports/analytics



## Understanding your Power Users

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In order to select the right BI front end, you need to understand who your Data Consumers are; how they'll be accessing data and what they will be doing with it.

### **Business Analysts:**

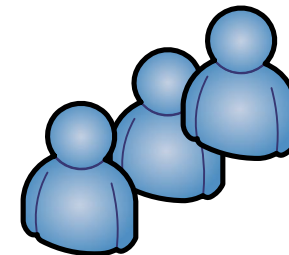
- Little or no SAS knowledge
- Often reliant on SAS programmers or IT to provide data
- Need access to data for analysis and reporting
- Need to be able to get data quickly and easily
- Require a Business View of the data

### **Statistician:**

- Extensive SAS knowledge (STAT)
- Less understanding of data access techniques
- Require access to large amounts of data for exploration and modeling
- Often reliant on SAS programmers or IT to provide data
- No such thing as too much data

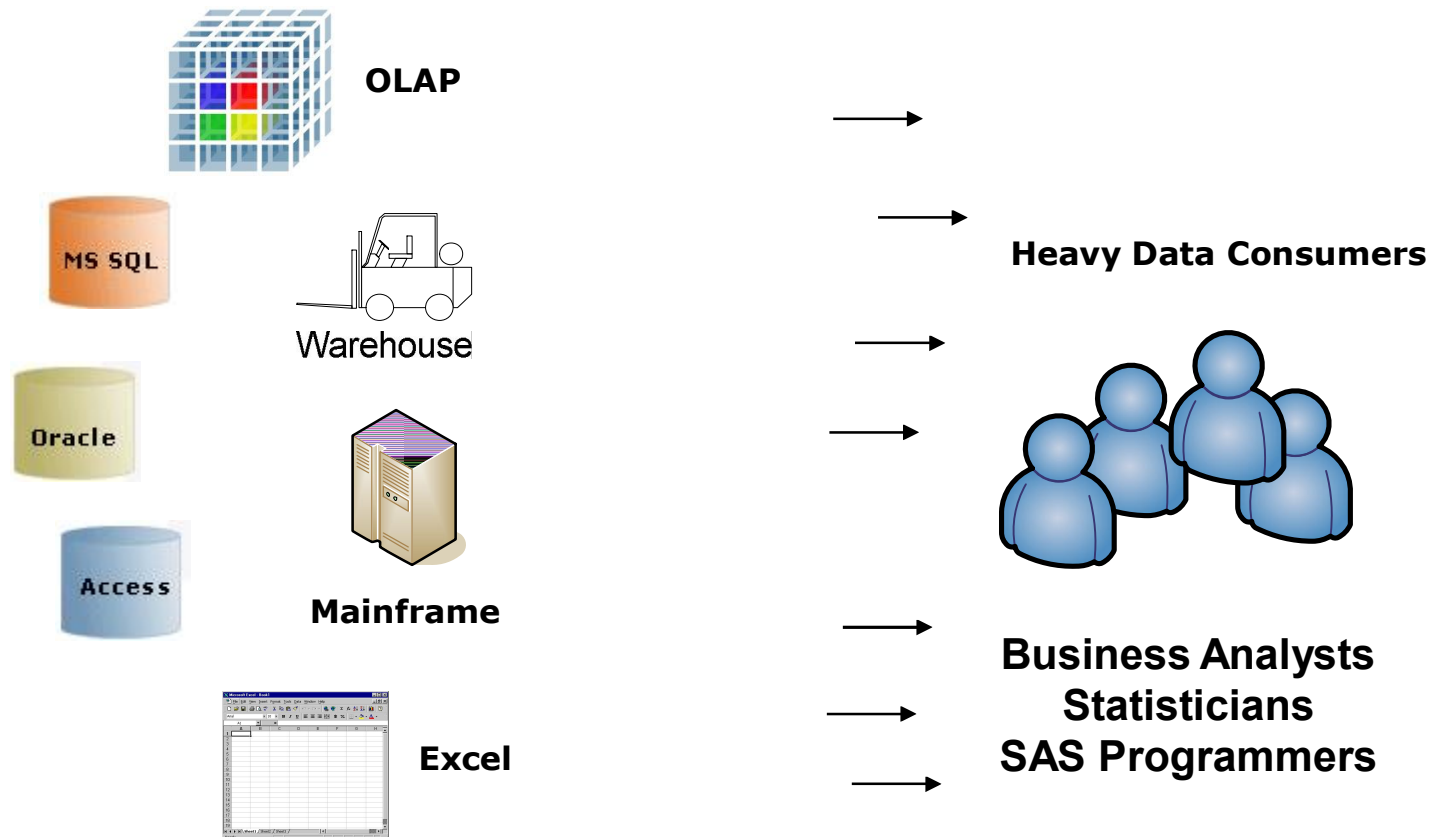
### **SAS Programmer:**

- Extensive SAS knowledge
- Little need for GUI interface
- Understanding of data access
- Support Business Analyst to access data
- Production Report creation



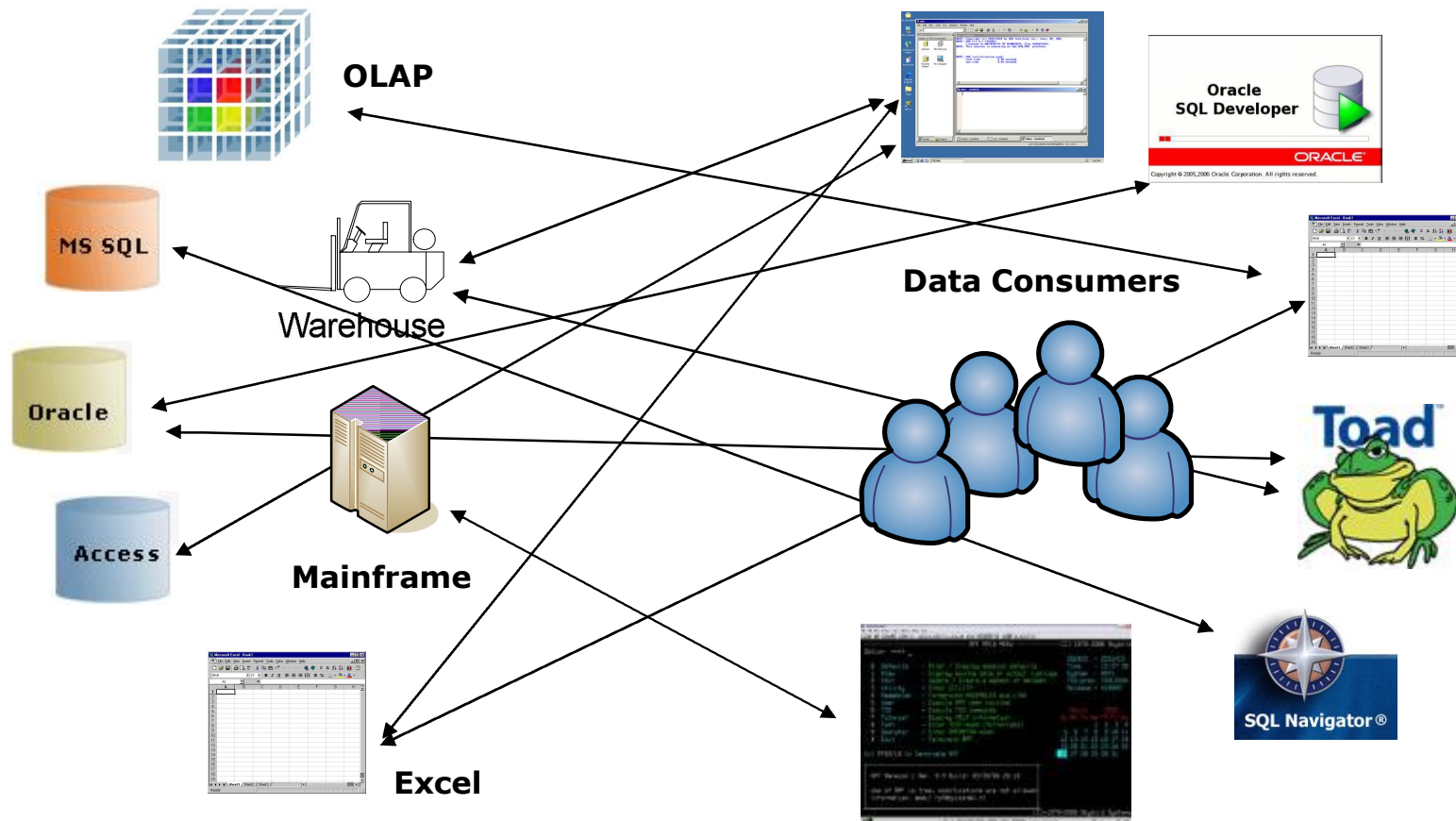
## Understanding your Data Sources

Your organization's data is stored in multiple sources and formats. In order to truly facilitate one view of the Enterprise, your BI Platform will need to point to various sources of data including OLAP Cubes, Legacy data stored on the Mainframe, as well as various databases.



## How are your Users accessing Data now?

Many organizations have a mix of tools that are being used to access data.



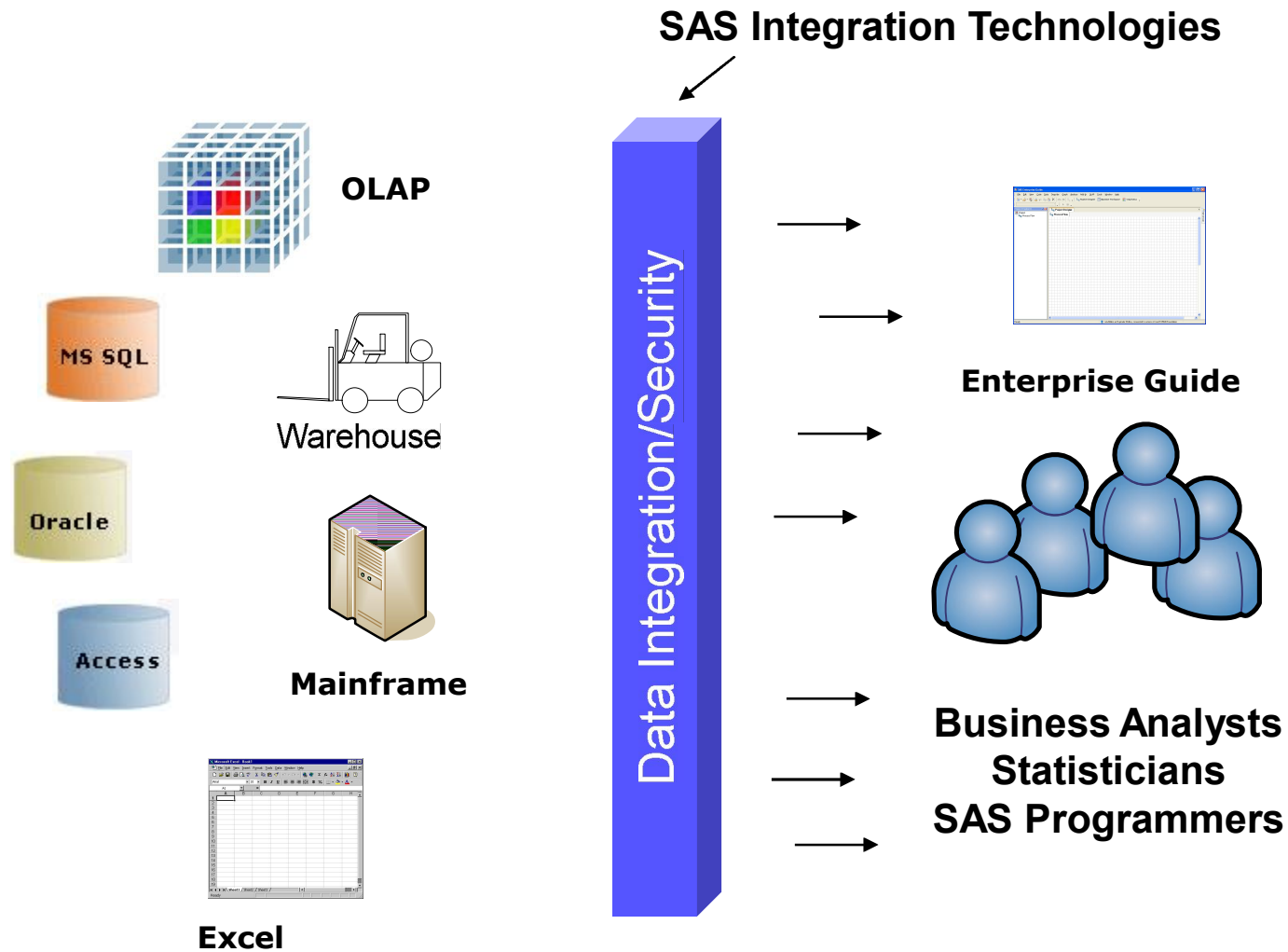


## Multiple Tools & Multiple Data Sources... Challenges

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- Each data source needs to be managed
- Often, SQL tools will hit the data source directly so security constraints need to be set up and maintained on the Data source
- Less control over query execution
- Non-standardized logging across sources/tools
- Most tools are used for Data Extraction only, further analysis involves another tool
- Many IT Administrators grant access to data sources through Generic IDs – unable to track and audit what users are doing
- More tools to support

## How SAS Enterprise Guide Fits in

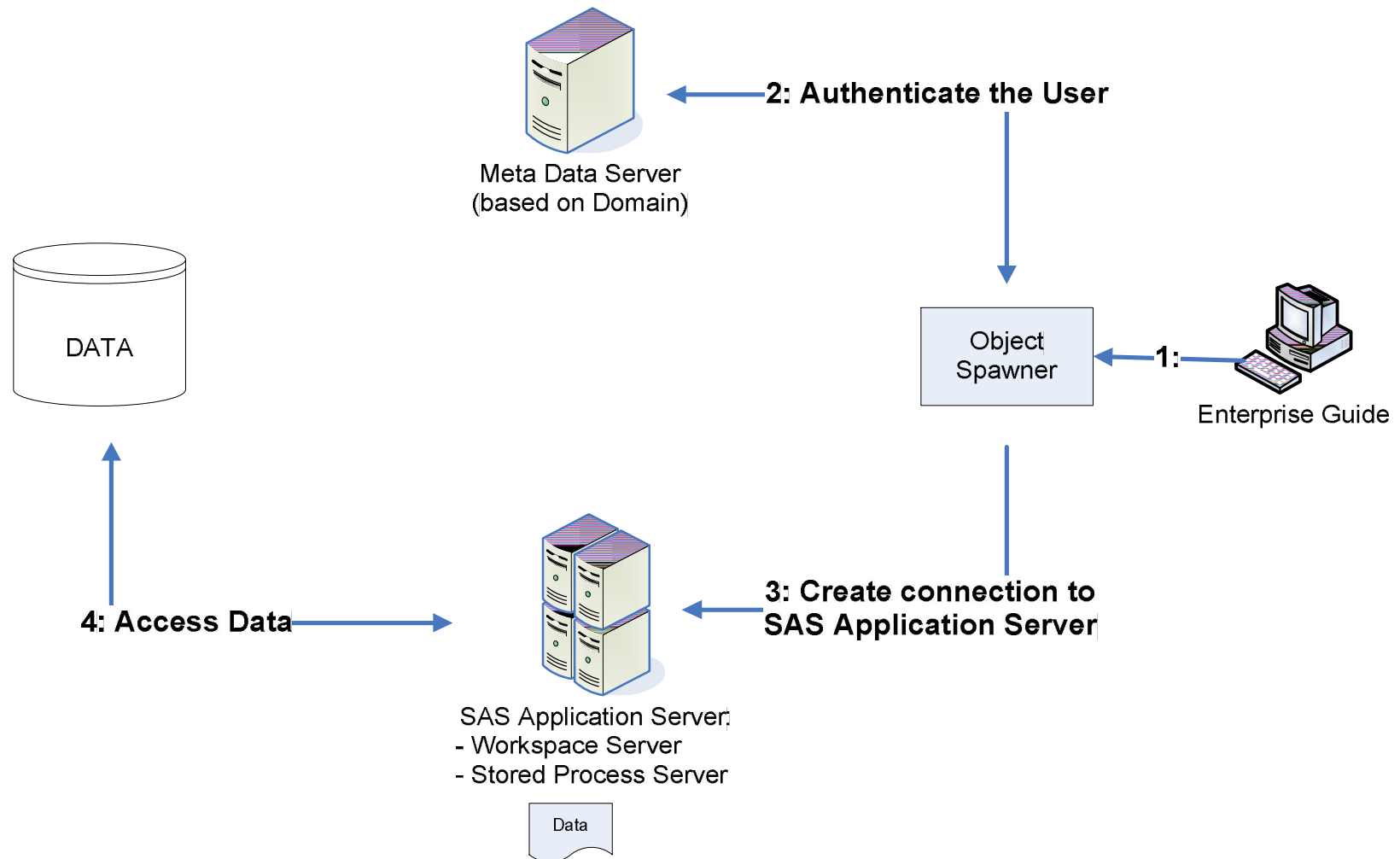


## What is SAS Enterprise Guide

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- A Microsoft Windows client application that allows the user to interface with SAS
- Designed for Business users, SAS Programmers and Statisticians
- Allows non-SAS users to access and run the various SAS procedures through GUI driven tasks
- Code development/editor for SAS Programmers
- Facilitates Data access and management across various sources systems
- Provides the ability to run SAS' Analytical Procedures and Tasks
- THIN client application
- SAS does not sit on your local PC

## What's Happening Behind the Scenes



## Enterprise Guide and your Users

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Enterprise Guide has a wide range of functionality to support your Power Users

- Built-in Querying Wizard
  - Query and Filter Data using drag & Drop wizard
  - Preview database data without importing all data
  
- Basic Summary Tasks
  - Summary Statistics/Calculations
  - Data Exploration and Analysis
  
- Graphs (Bar, Pie, Scatter, Bubble, Contour, Surface Plots, Map graphs, Radar chart etc)

## Enterprise Guide and your Users

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Enterprise Guide has a wide range of functionality to support your Power Users

- Advanced Analytics
  - Tasks built on SAS/ETS, SAS/QC & SAS/STAT eg.
    - Linear/Mixed/Logistic Models
    - Time series analysis
  
- OLAP Cube Viewer
  
- Code Editor for custom SAS Code
  
- All wizards generate code that can be customized

## What's new in Enterprise Guide 4.2?

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- Cleaner look and feel
  - Context based menus
  - Role based functionality
- More/Enhanced wizards for SAS Tasks
  - Proc Report
  - Query Builder
- New graph tasks
  - GMAP
  - GTile
- Ability to build Conditional Flows
- Enhanced Prompt Manager

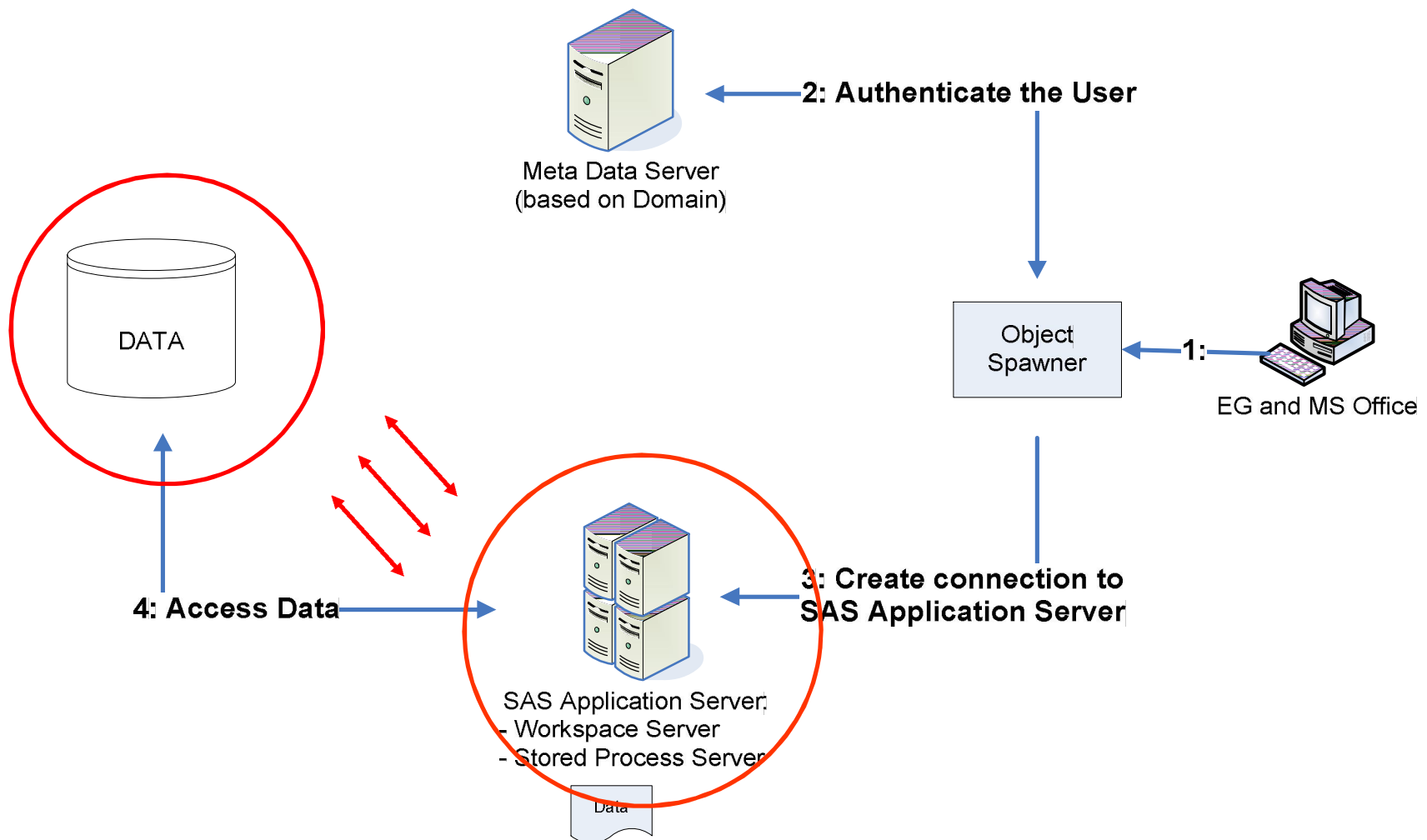
## What's new in Enterprise Guide 4.2?

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# DEMO



## Understanding how EG Connects to your Databases



## Understanding how EG Connects to your Databases - Make the database do the work

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**We want to minimize the amount of data being passed back to the SAS Server so we want the Database to do the filtering and query joins wherever possible – SAS/Access**

- Whenever possible, SAS is going to pass all joins, filtering to the database to perform to minimize the data being passed back over the server
- SAS/Access will automatically translate many SAS functions into functions specific to the DBMS

### **Example:**

Datetime function in SAS is translated to the SYSDATE function in Oracle.

## Understanding how EG Connects to your Databases - Make the database do the work

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### What happens if a SAS query command can't be translated?

The database is going to pass back ALL the data to the SAS server so that it can process the command.

This can result in:

- Longer querying times
- Excessive server usage
- Slower server response for other users.

## Tips for working with Large Data in EG

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**Helpful Hint:** Update your options so that SAS EG does not try to open any new data when its added to your project.

By default, Enterprise Guide is going to try to open any new data that you add to your project. This can be time consuming when you add large database tables to your project view.

- Select **Tools** → **Options** → **Data**
- **UNCHECK** 'Automatically open data when added to project'

- Use data tables in unprotected (read/write) mode
- Automatically open data when added to project
- Always prompt when closing a project with temporary data references

## Where to go for more information...

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- SAS Support – What's new in Enterprise Guide 4.2  
<http://support.sas.com/documentation/cdl/en/whatsnew/62580/HTML/default/egwhatsnew42.htm>
- Getting Started with SAS Enterprise Guide – free learning tutorial available at  
<http://support.sas.com/documentation/onlinedoc/guide/tut42/en/menu.htm>
- Enterprise Guide Discussion Forum  
<http://support.sas.com/forums/index.jspa?categoryID=1>
- SAS Global Forum 2010
- Little SAS Book for Enterprise Guide 4.2 – By Susan J. Slaughter, Lora D. Delwiche, <http://www.sas.com/apps/pubscat/bookdetails.jsp?catid=1&pc=61861>

Questions??

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