

# SAS® GLOBAL FORUM 2017

April 2 – 5 | Orlando, FL

## **Read SAS® Metadata in SAS® Enterprise Guide**

Paper 1275-2017

USERS PROGRAM





# Read SAS Metadata in SAS Enterprise Guide

Steven Randolph : Eli Lilly and Company

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## 1. Abstract

SAS® Management Console has been key tool to interact with SAS® Metadata Servers. But sometime users need much more than what SAS Management Console can do. This paper contains couples of SAS macros which can be used in SAS® Enterprise Guide/ PC SAS® to read SAS® Metadata. These macros read users, roles and groups registered in metadata.

SAS macros given in associated paper explain how these macros can be executed in SAS® Enterprise Guide and how to change these macros to meet other business requirement. There may be some tools available in the market, which can be used to read SAS® Metadata but this paper helps in achieving most of them within SAS client like PC SAS and SAS Enterprise Guide by avoiding any additional plugin.

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## 2. Data Step Functions to Read Metadata

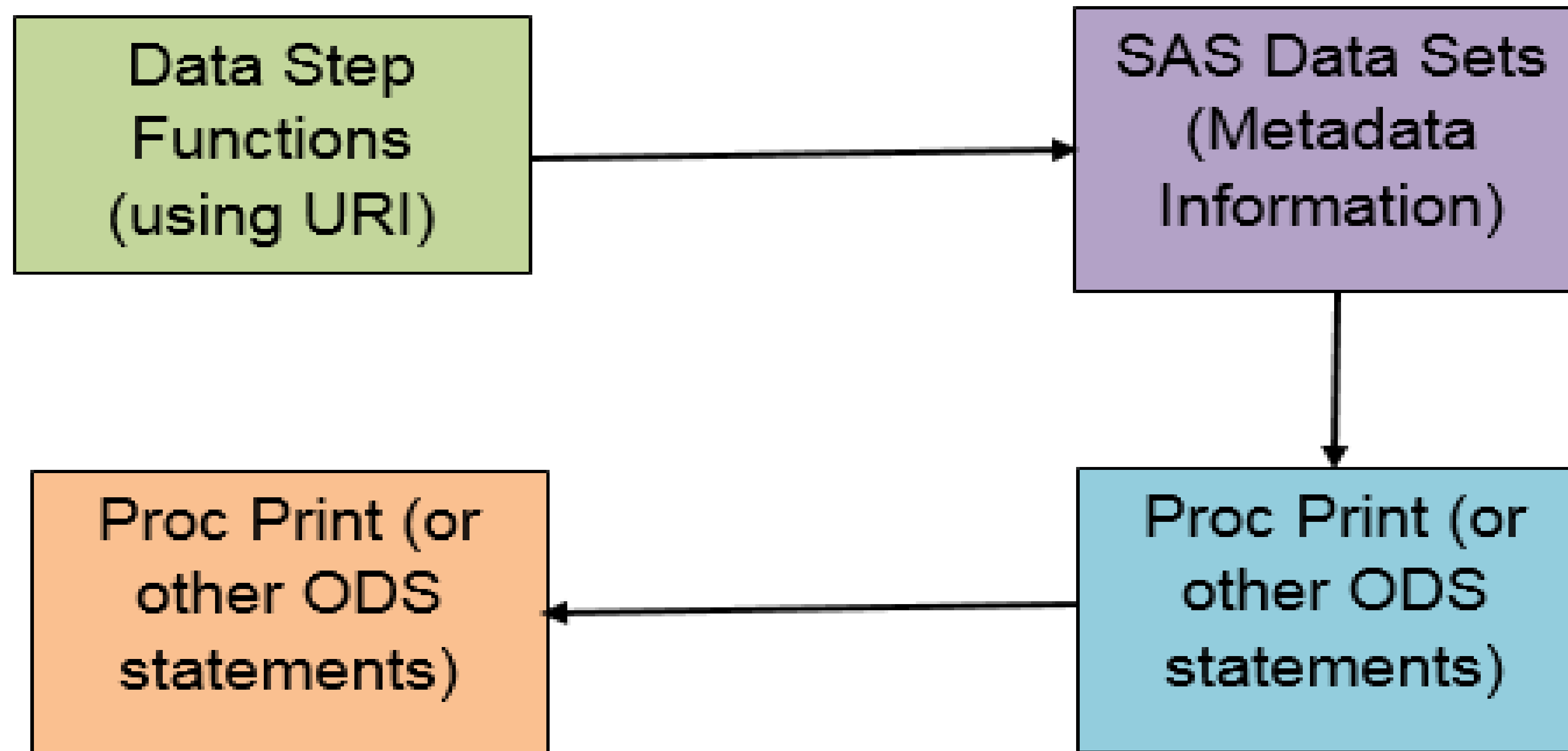
- **There are different ways to read SAS Metadata like XML Libname, SAS Procedures, Data Step Functions etc..**
- **This presentation and paper is Data Step Functions based.**
- **We will be using the different data step functions in SAS code given in the paper.**

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## 2. Data Step Functions to Read Metadata (Contd...)





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## 3. Read Metadata Users

### Use Data Step with URI to Read Registered Users in Metadata

```
data metauser_info;
length uri name DisplayName group groupuri $256;
call missing (uri, name, Displayname, group,
groupuri);
n=1;
  nobj=metadata_getnobj("omsobj:Person?@Id contains
'.'",n,uri);
  if nobj=0 then
    put 'No User';
else
  do while (nobj > 0);
    rc=metadata_getattr(uri, "Name", Name);
    rc=metadata_getattr(uri, "DisplayName",
DisplayName);
    a=1;
    grpasn=metadata_getnasn(uri,"IdentityGroups",
a,groupuri);
```

```
    if grpasn in (-3,-4) then
      do;
        group="No groups";
        output;
      end;
    else
      do while (grpasn > 0);
        rc2=metadata_getattr(groupuri, "Name", group);
        a+1;
        output;
        grpasn=metadata_getnasn(uri,"IdentityGroups",a,group
uri);
      end;
      n+1;
    nobj=metadata_getnobj("omsobj:Person?@Id contains
'.'",n,uri);
  end;
  keep name DisplayName group;
run;
```

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## 3. Read Metadata Users (Contd...)

----- name=devnz12 -----			
Display			
Obs	Name	group	UserId
1	NetezzaD	Netezz_d	nza425
2	NetezzaD	Netezz_a	nza428
3	NetezzaD	Netezz_f	nza429
----- name=testora -----			
Display			
Obs	Name	group	UserId
4	OracleDB	Oracle_d	orat58
5	OracleDB	Oracle_a	orat59
6	OracleDB	orat60_f	orat60

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## 4. Metadata Roles and Identities

### Use Data Step with URI to Read Roles and Associated Identities

```
data Rolemembers;
    length id IdentType IdentId $17 RoleName Role_obj Role Uri
Role_desc ident_uri $ 256 identName  $60 type $32;
    call missing(type, id, RoleName, Role_obj, Role_desc,
Role Uri, Ident Uri, IdentId, IdentName, IdentType);
    Role_obj=cat("omsobj:IdentityGroup?IdentityGroup[@GroupType='Role']");
    Roles=metadata_resolve(Role_obj,type,id);
    if (Roles >0) then
        do n = 1 to Roles;
            call missing(Role Uri, RoleName,
Ident Uri, IdentId, IdentName, IdentType);
            nobj=metadata_getnobj(Role_obj,n,Role Uri);
            rc= metadata_getattr(Role Uri, "DisplayName",
RoleName);
            if (RoleName="") then
                rc= metadata_getattr(Role Uri, "Name", RoleName);
                rc= metadata_getattr(Role Uri, "Desc", Role_desc);

            mems=metadata_getnasn(Role Uri,"MemberIdentities",1,Ident_
uri);
```

```
    if (mems >0) then
        do j=1 to mems;

            ids=metadata_getnasn(Role Uri,"MemberIdentities",j,ident Uri);
            rc=metadata_getattr(ident Uri, "Id", IdentId);
            rc= metadata_getattr(ident Uri, "DisplayName", IdentName);
            if (IdentName="") then
                rc= metadata_getattr(ident Uri, "Name", IdentName);
            rc= metadata_getattr(ident Uri, "PublicType", IdentType);
            put IdentName= RoleName= IdentType=;
            output;
            call missing(Ident Uri,IdentId, IdentName, IdentType);
            end;
        else
            do;

                put IdentName= RoleName=;
                IdentName=" ---- ";
                IdentType=" ---- ";
                output;
                call missing(IdentType,IdentName);

            end;
            call missing(Role Uri, RoleName);

        end;

run;
```



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## 4. Metadata Roles and Identities (Contd...)

Obs	Ident	RoleName	Role_desc	Ident
	Type			Name
1	Uar_Grp	AddMSOffice:Analytics	Analytics For MSOffice Users.	Public
2	----	AddMSOffice:OtherUser	Role of light users.	----
3	Uar_Grp	EG User	Capabilities for SAS EG Users	Report

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## 5. Recommended Reading

**For detailed information about SAS Macro and concept, please refer :**

**Paper 1275 – 2017**



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## 6. Summary

- SAS Macros given in this paper provides the foundation for reading the SAS Metadata Information.
- Specially for platform administrators, it's very important to understand the building block of metadata repository and read them quickly/ efficiently.
- There may be some tools available to get metadata reports but having your own SAS code provides the flexibility to customize your report and providing user capability to read their information, makes your (administrator) job easy.



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