

## [Tech Note 690](#)

# How to Hide the Public NameSpace and Tags in ActiveFactory v9.2

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## Introduction

This *Tech Note* explains how to hide the Public Groups namespace and tags for selected users in ActiveFactory version 9.2 or higher; other non-specified users will still be allowed to view this NameSpace.

This two-step process explains:

- How to modify the existing stored procedures to filter out the Public Groups NameSpace.
- How to create a View to hide all non-Private tags.

**Note:** The examples in this *Tech Note* make customized changes to the **Runtime** database. These changes MIGHT BE LOST when applying patches, service packs, or other upgrades to the InSQL Server system.

Figure 1 (below) shows what the default Public Groups NameSpace looks like, along with some user-created Private Groups:

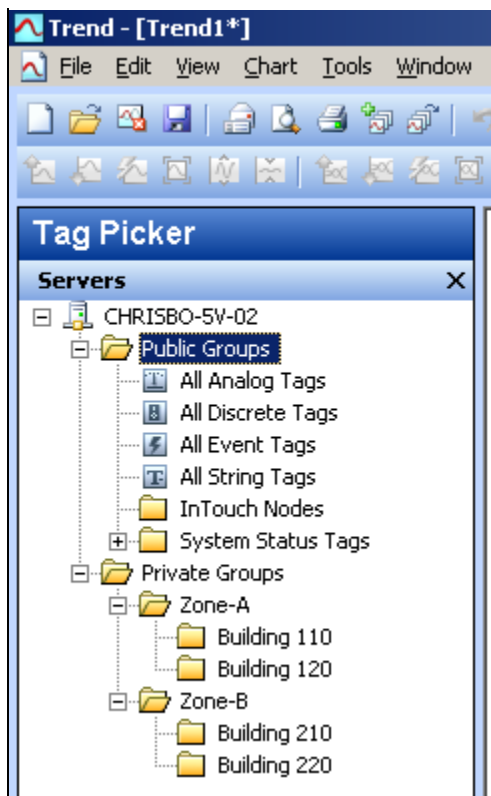


FIGURE 1: DEFAULT PUBLIC GROUPS

Figure 2 (below) shows a modification with the Public Groups NameSpace folders hidden:

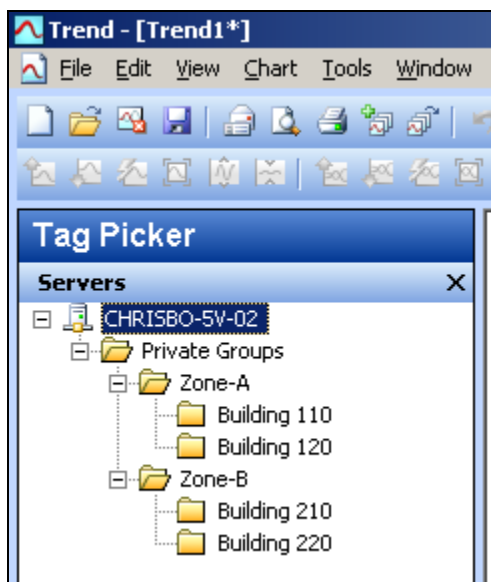


FIGURE 2: MODIFIED PUBLIC GROUPS

## Application Versions

- ActiveFactory 9.2
- Microsoft SQL Server 2005
- Wonderware IndustrialSQL Server (Historian) 9.x

## Modifying the Public NameSpace

The **Public Groups** NameSpace can ordinarily be modified by simply deleting NameSpace folders underneath the top-level group. Deleting folders is accomplished using one the ActiveFactory client tools or the InSQL Console, provided that

- You are connected with wwAdmin login or higher.
- You have a default installation.

The problem with this approach is that changes to the Public Groups NameSpace are propagated to *all* users (logins) and cannot easily be changed back to the default Public Groups NameSpace view.

The following approach allows the contents of the Public NameSpace to be viewed differently based on the login credentials. It also allows the default **Public Groups** NameSpace to be easily restored if necessary.

## How Does ActiveFactory Populate the Public Groups NameSpace?

ActiveFactory uses a stored procedure (aaPublicNSSelect) to populate the Public Groups NameSpace. This stored procedure is created by IndustrialSQL Server at installation time and can be found in the Runtime database under the Programmability -> Stored Procedures location.

Figure 3 (below) shows where to find this using Microsoft's SQL Server Management Studio.

1. Open the SQL Server Management Studio and expand the **Runtime** database, then **Programmability/Stored Procedures** root.

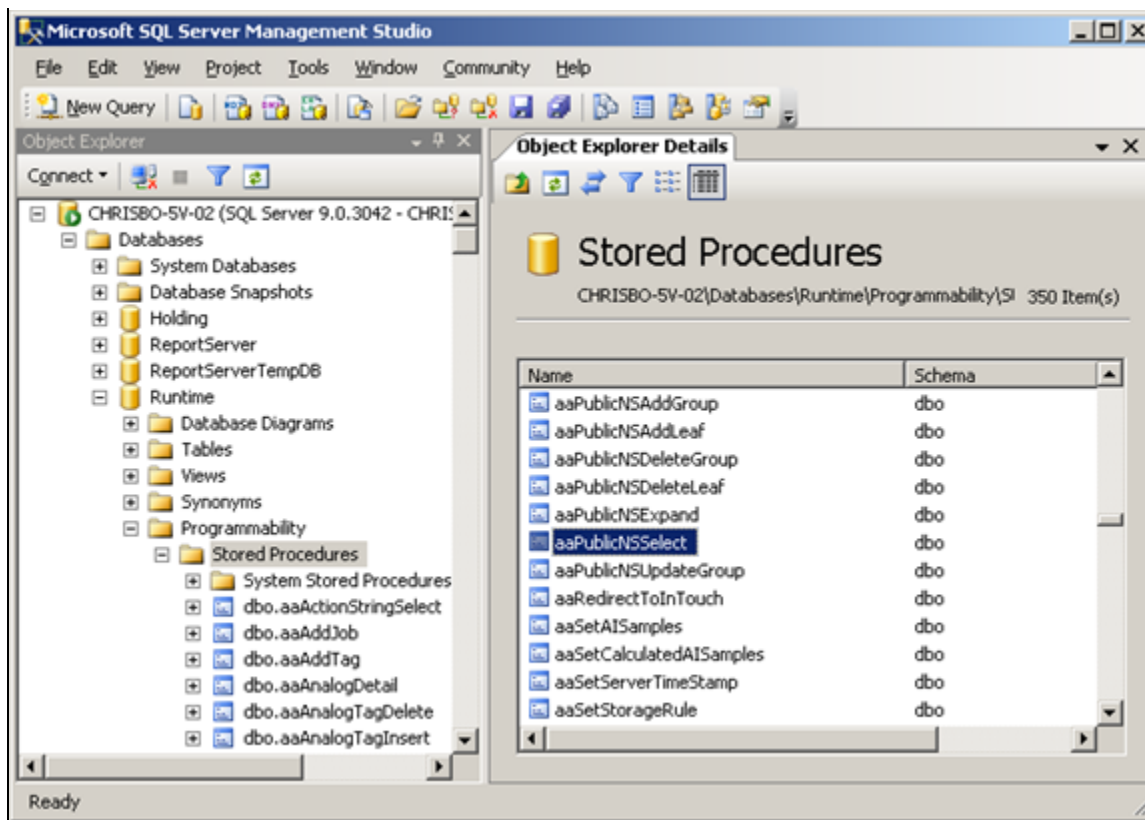


FIGURE 3: aaPUBLICNSSELECT STORED PROCEDURE

2. Right-click **dbo.aaPublicNSSelect** and click **Modify**. A query editor displays the T-SQL code used in the stored procedure:

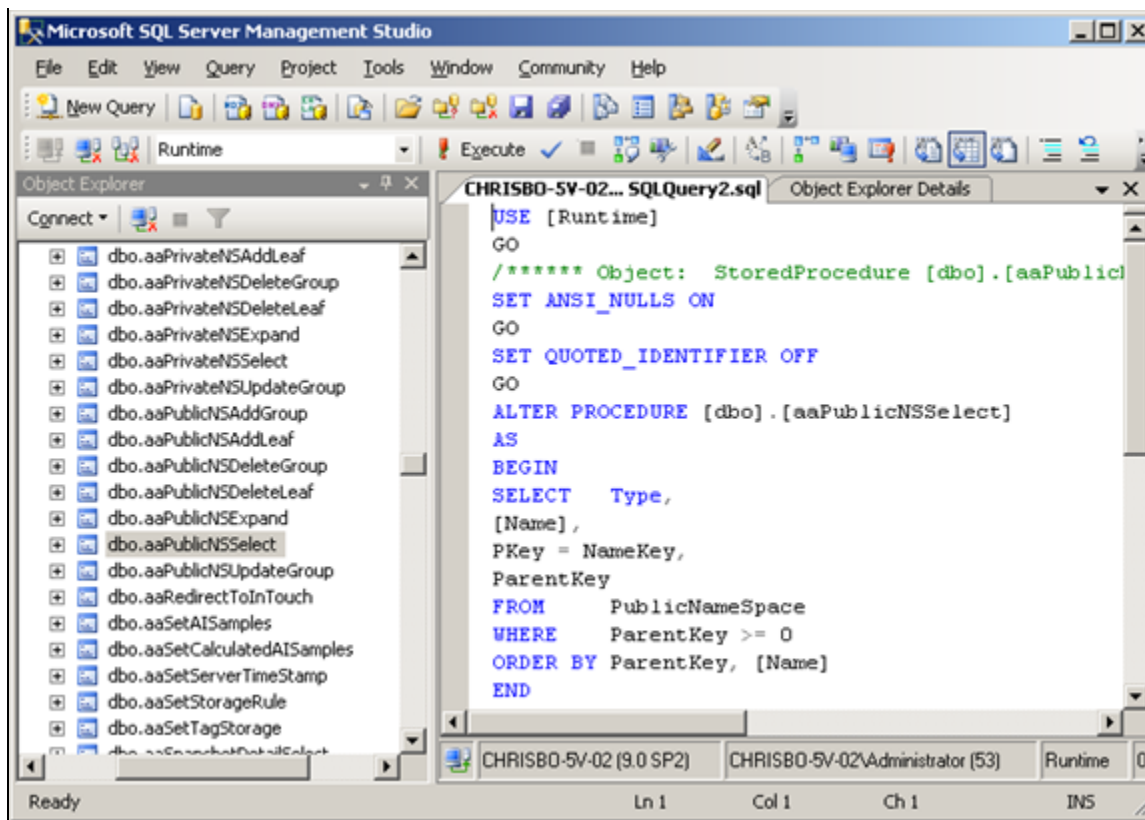


FIGURE 4: STORED PROCEDURE QUERY EDITOR WINDOW

This stored procedure returns a result set from the SQL table called **PublicNameSpace**. The query results contain several columns, including:

- PKey = NameKey,
- ParentKey

and the criteria of:

- WHERE ParentKey >= 0

These parameters return all folders with a ParentKey value greater than or equal to 0, including all of the groups except for the topmost Public Groups (has ParentKey=0). The top Public Groups is the parent of all other top-level groups.

Figure 5 (below) shows the contents of the **PublicNameSpace** table. Note that each row includes a unique NameKey value (aliased as PKey in the stored procedure). This is the value that can be used to hide various Public Groups folders:

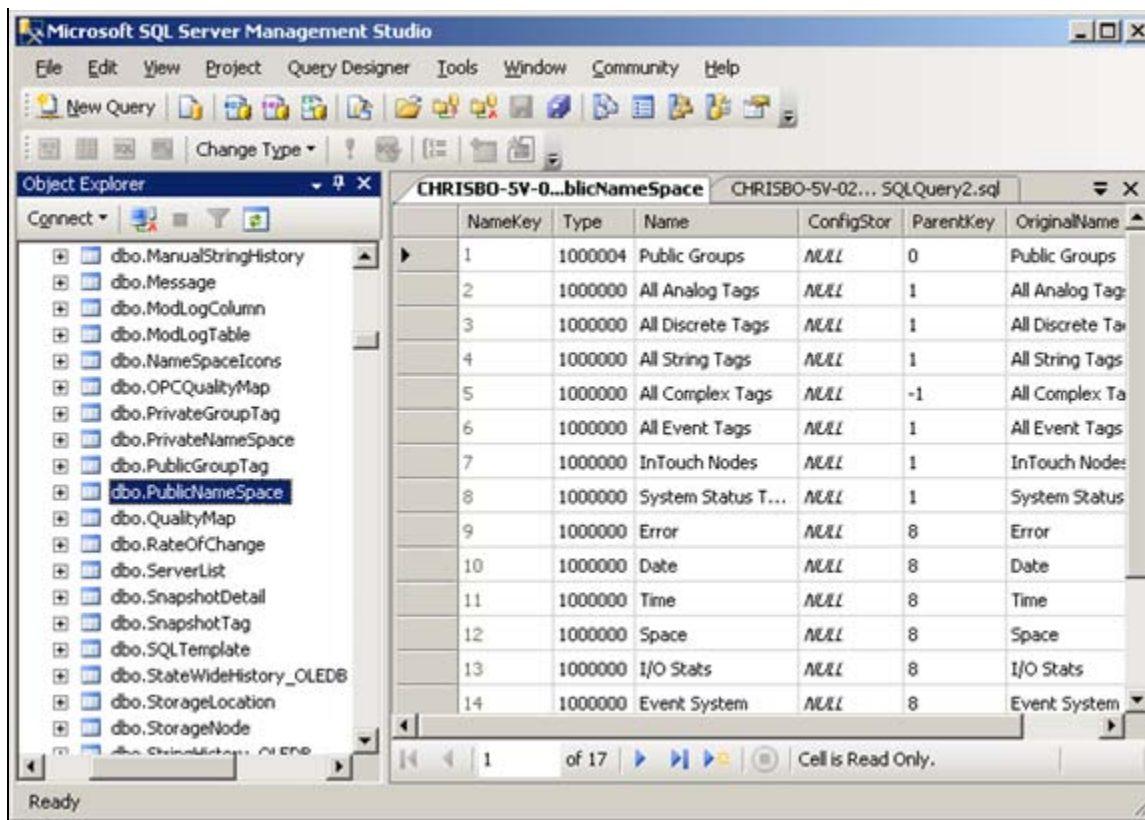
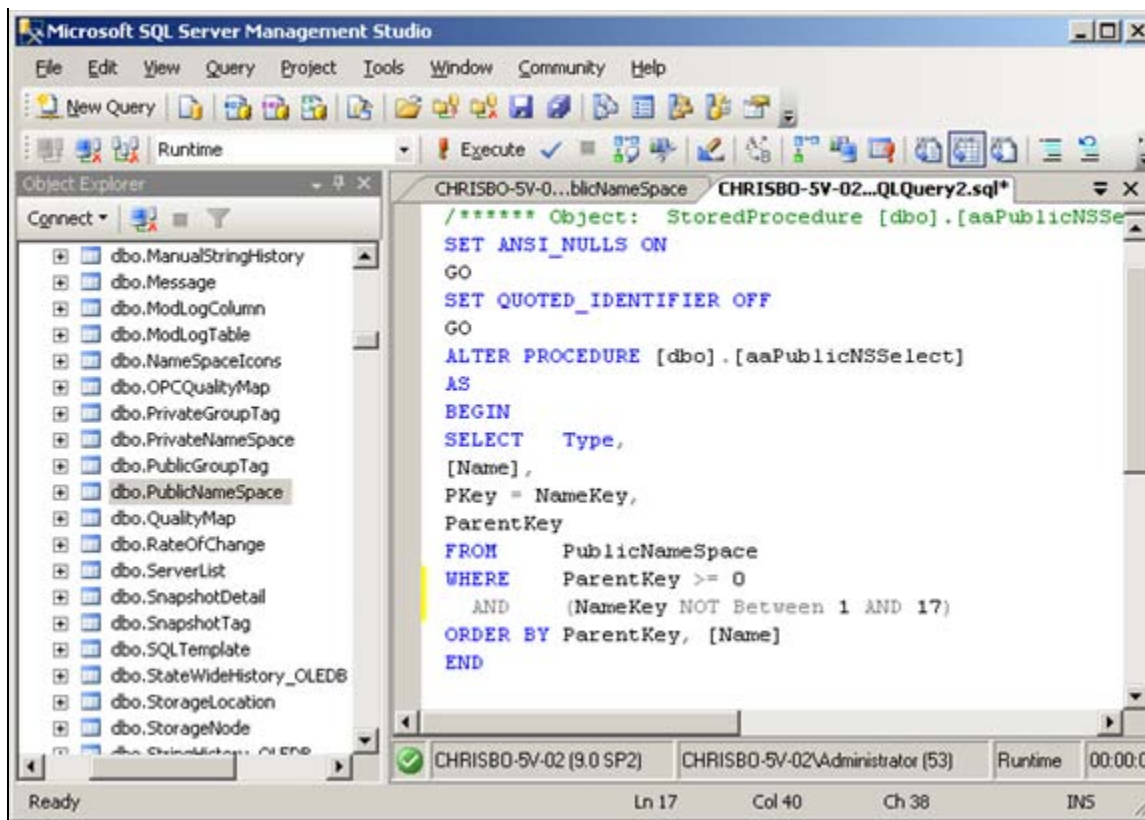


FIGURE 5: PUBLICNAMESPACE TABLE CONTENT

You can modify the result set returned by the **dbo.aaPublicNSSelect** stored procedure by modifying the T-SQL query that the stored procedure executes. In order to filter out particular Public NameSpace folders, you modify the **WHERE** clauses to the T-SQL in the stored procedure.

In Figure 6 (below), the query has been modified after the WHERE clause:



**FIGURE 6: MODIFIED STORED PROCEDURE**

In this example, all Public NameSpace folders with a NameKey value between **1** and **17** have been filtered out using the line:

```
AND (NameKey NOT BETWEEN 1 AND 17)
```

This is how the hidden Public Groups NameSpace shown in Figure 2 above was created.

You can use other criteria in the WHERE clause to selectively filter out only certain groups as well. Try using this line to exclude some but not all of the groups:

```
AND NameKey NOT IN (4, 5, 7, 8)
```

The Trend Tag Picker Panel appears like Figure 7 (below).

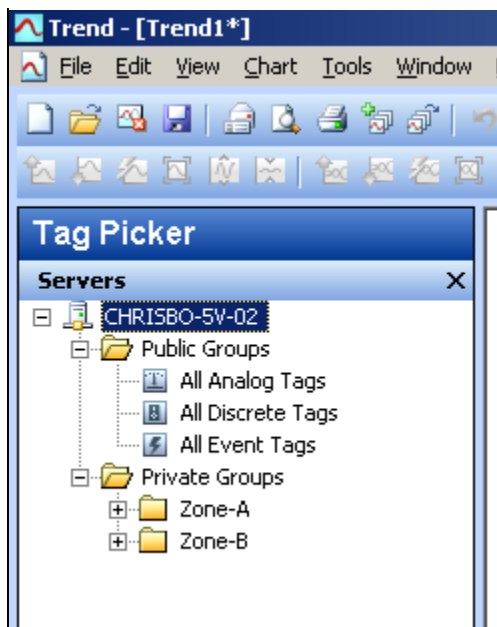


FIGURE 7: SELECTIVELY FILTERED PUBLIC GROUPS NAMESPACE

After executing the changes to the `dbo.aaPublicNSSelect` stored procedure, you will now see the modified Public Groups NameSpace in any of the ActiveFactory client tools including the Reporting Website.

**Note:** that with the change to `dbo.aaPublicNSSelect` shown in Figure 6, the default Public Groups NameSpaces will be hidden from all users.

## Creating a Different Public NameSpace for Different Logins

You can extend this approach to have a different Public Groups NameSpace view for different logins.

**Note:** The following section assumes that you want to HIDE the default Public NameSpace for IndustrialSQL Server users *except* those who connect with the `wwAdmin` login.

## Background

In SQL Server 2000, stored procedure properties include the owner of the stored procedure. Normally, when a stored procedure is executed and the owner is not explicitly specified, the execution will default to the stored procedure owned by the `dbo` (database owner).

However, if another stored procedure has the same name but is owned by the database user that attempts to execute the stored procedure, the SQL Server will default to that procedure rather than to the one owned by the `dbo`.

In SQL Server 2005 and 2008, the same principle applies. However, instead of owners, database objects belong to **schemas**. By default every database user is the owner of a schema that has the same name as the user, and an object's owner is effectively identical to the owner of the schema that contains it. However, schemas exist independently of the database user that creates them, and ownership of schemas can be transferred without changing their names.



**Note:** Discussion of SQL Server permissions are outside the scope of this *Tech Note*. For more information, refer to SQL Server Books Online.

Figure 8 shows the stored procedures' Schema columns (using SQL Server Management Studio):

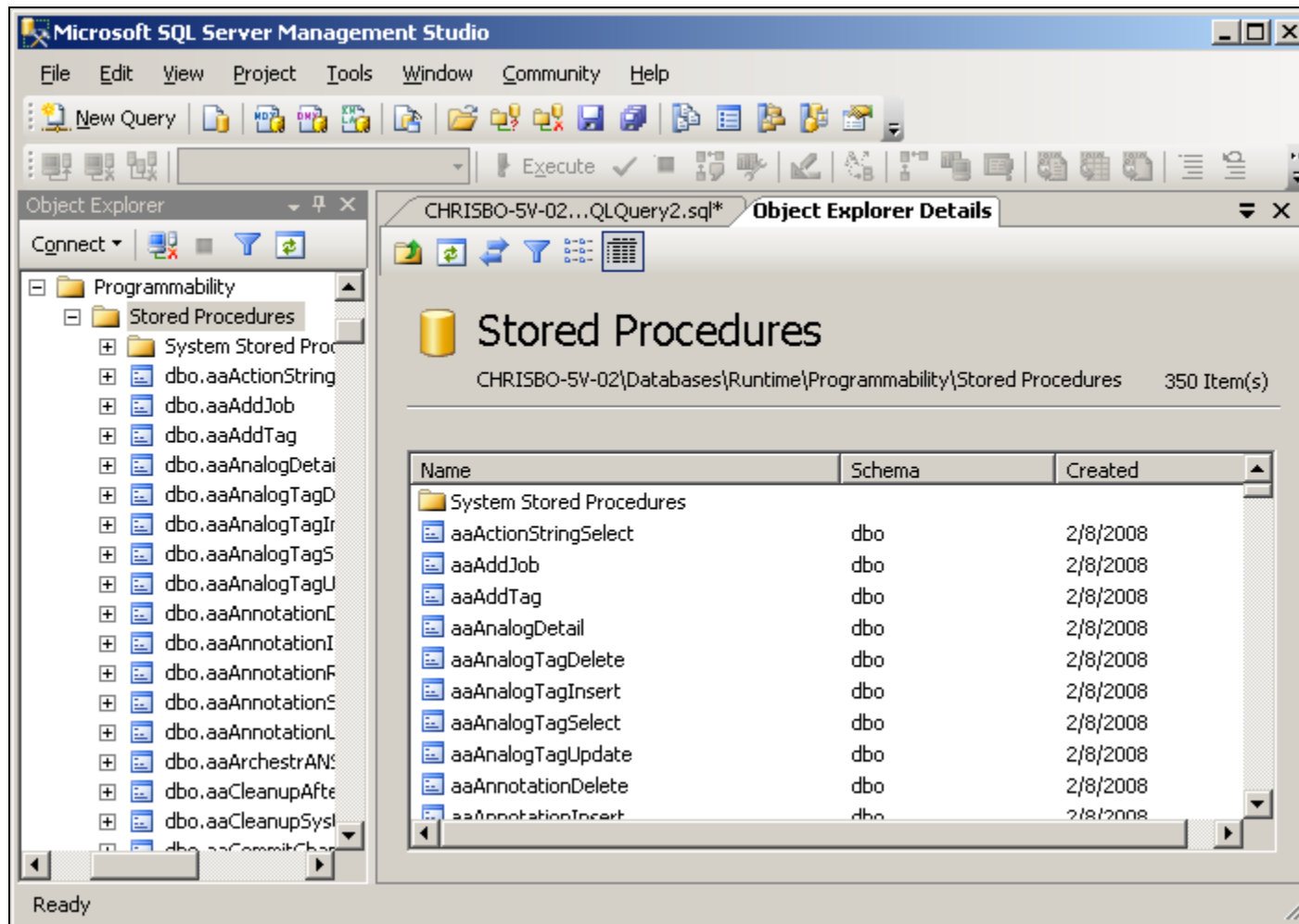


FIGURE 8: STORED PROCEDURE SCHEMA COLUMN

In order to have a different Public Group NameSpace appear when connected to IndustrialSQL Server using the login wwAdmin, you can create a second copy of aaPublicNSSelect with wwAdmin as the owner/schema name (not dbo).

#### To create a new Stored Procedure with a different owner or Schema name

1. Start SQL Server Management Studio.
2. Connect as **wwdbo**, **sa**, or other equivalent administrative privilege.
3. Execute the following T-SQL query. It will create the necessary stored procedure:

```

USE Runtime
GO
CREATE PROCEDURE wwAdmin.aaPublicNSSelect AS
BEGIN
SELECT Type,
Name,
PKey = NameKey,
ParentKey
FROM PublicNameSpace
WHERE ParentKey >= 0
ORDER BY ParentKey, Name
END

```

Figure 9 (below) shows the Query and the expected result set:

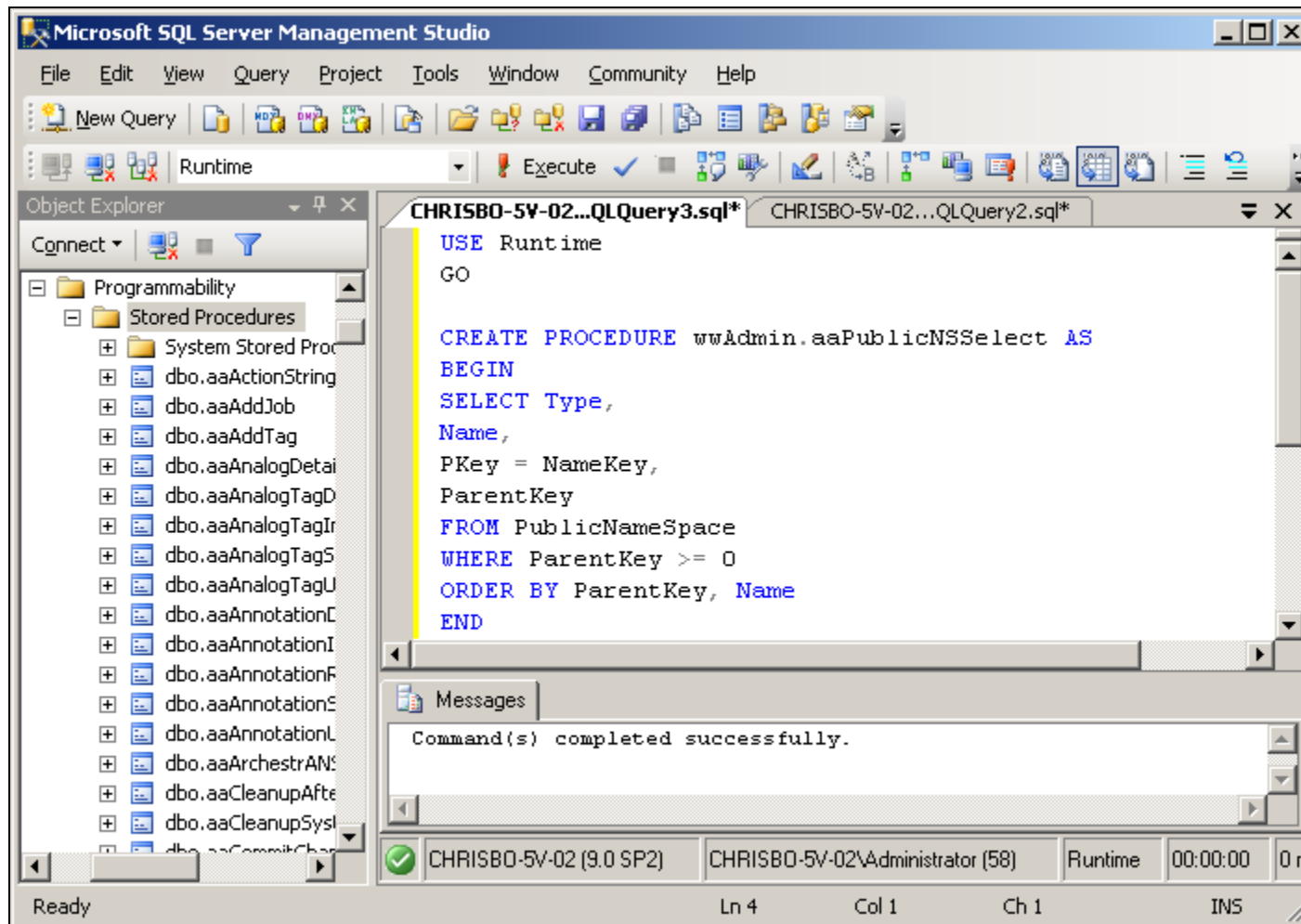


FIGURE 9: SQL QUERY AND RESULT SET

After the wwAdmin.aaPublicNSSelect stored procedure has been created, the default Public Groups NameSpace will be displayed when connecting to IndustrialSQL Server with the UserName wwAdmin.

You can see both stored procedures in SQL Server Management Studio (Figure 10, below):

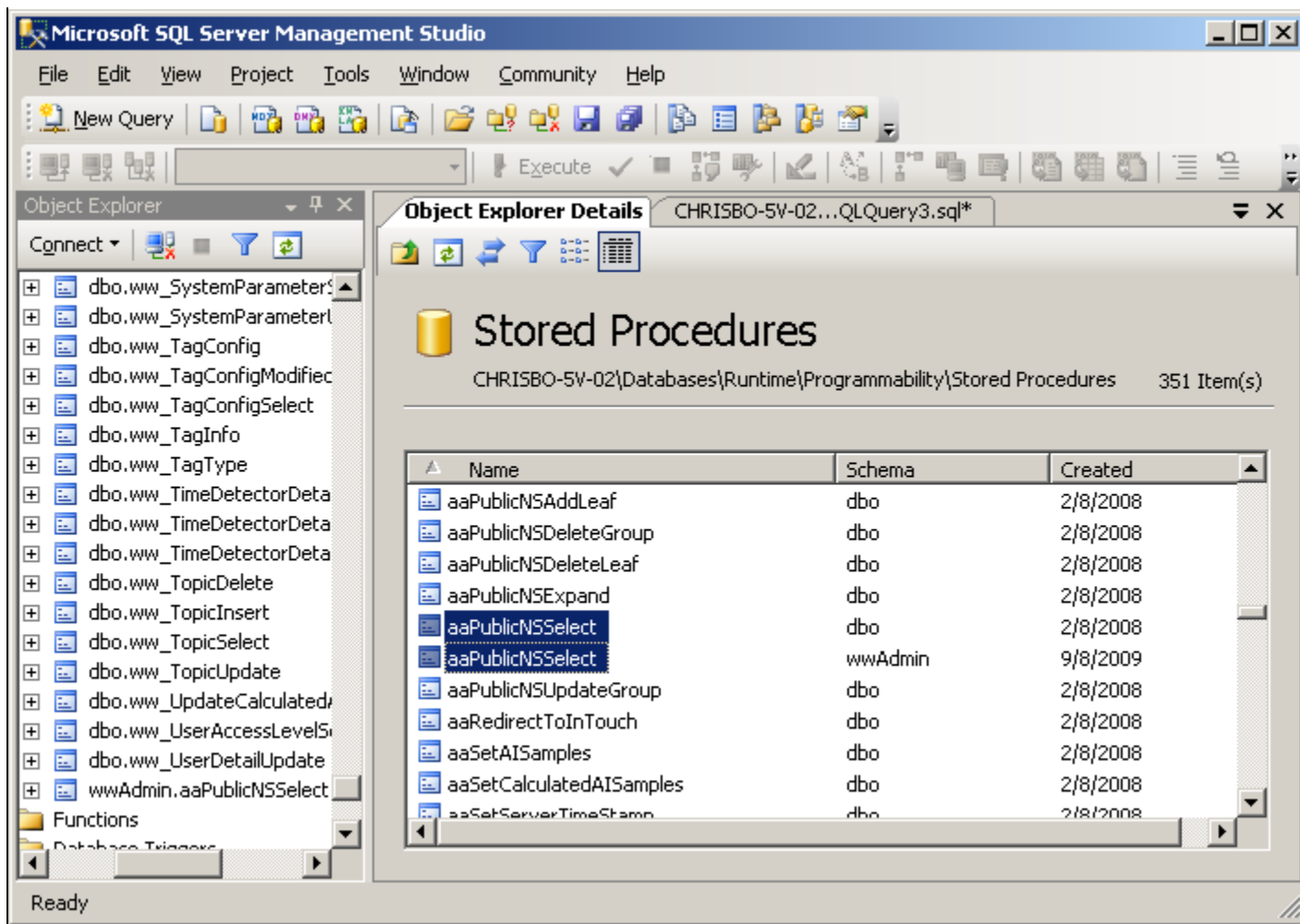


FIGURE 10: NEW STORED PROCEDURE

## Connecting to IndustrialSQL Server as wwUser

When you use an ActiveFactory client application (such as ActiveFactory Trend) and connect with the login wwAdmin, the original Public Groups NameSpace is displayed. This is because the (new) stored procedure used to populate the Public NameSpace is wwAdmin.aaPublicNSSelect.

Figure 11 (below) shows the Public Groups NameSpace (in AF Trend) when connected as **wwUser**:

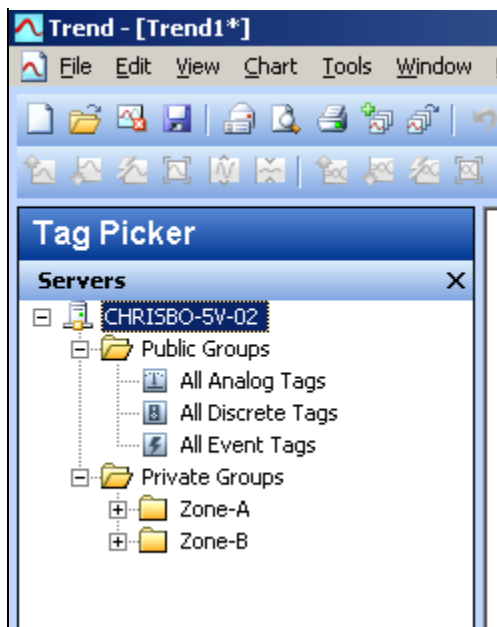


FIGURE 11: PUBLIC GROUPS NAMESPACE USING WWUSER LOGIN

**Note:** Any InSQL login other than wwAdmin will provide the modified view of the Public Groups NameSpace.

Reconnect using wwAdmin to see the complete (default) Public Groups NameSpace:

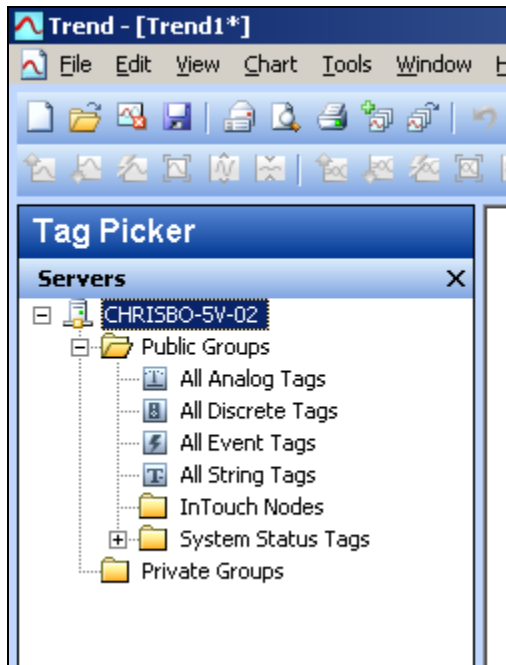


FIGURE 12: PUBLIC GROUPS NAMESPACE USING WWADMIN

## Creating a User-specific View to Hide Public Tags

So now we have hidden name spaces so that only certain groups are visible for certain users. However, if you click on the root level of the server name you can see all of the tags in the system, regardless of whether their Public Groups name space is hidden or not.

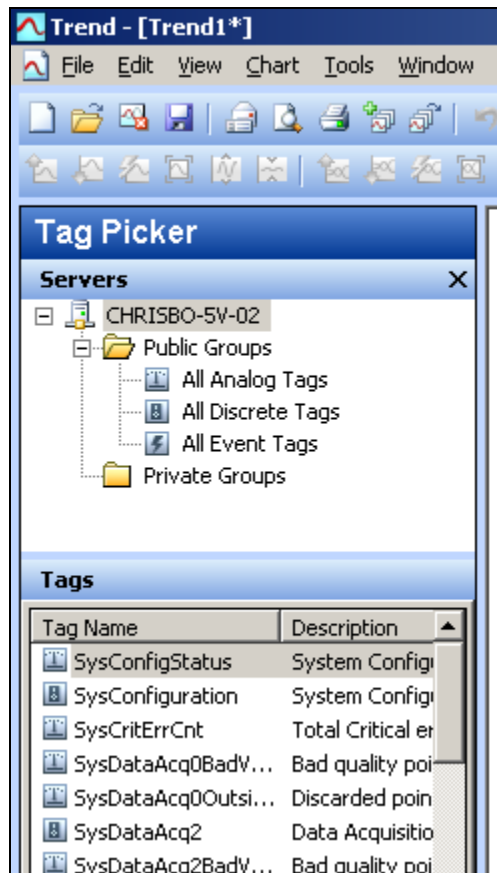


FIGURE 13: ROOT LEVEL SHOWING ALL TAGS BY DEFAULT

Similarly to how you created a stored procedure with a different owner/schema name, you can also create SQL tables and views with different owners/schemas. In the following example, you will limit the tags shown to only include the ones that are already members of the user's Private Groups. You will create a new view of the Tag table, but with wwUser as the owner/schema name (not dbo).

1. Launch SQL Server Management Studio.
2. Connect as **wwdbo**, **sa**, or other equivalent administrative privilege.
3. Execute the following T-SQL query. It will create the new view:

```
USE Runtime
GO
CREATE VIEW wwUser.Tag AS
SELECT * FROM dbo.Tag
WHERE wwTagKey IN (SELECT wwTagKey FROM TagRef
JOIN PrivateGroupTag gt ON TagRef.wwDomainTagKey = gt.wwDomainTagKey
AND gt.UserKey = dbo.faaUser_ID())
GO
```

Figure 14 (below) shows the Query and the expected result set:

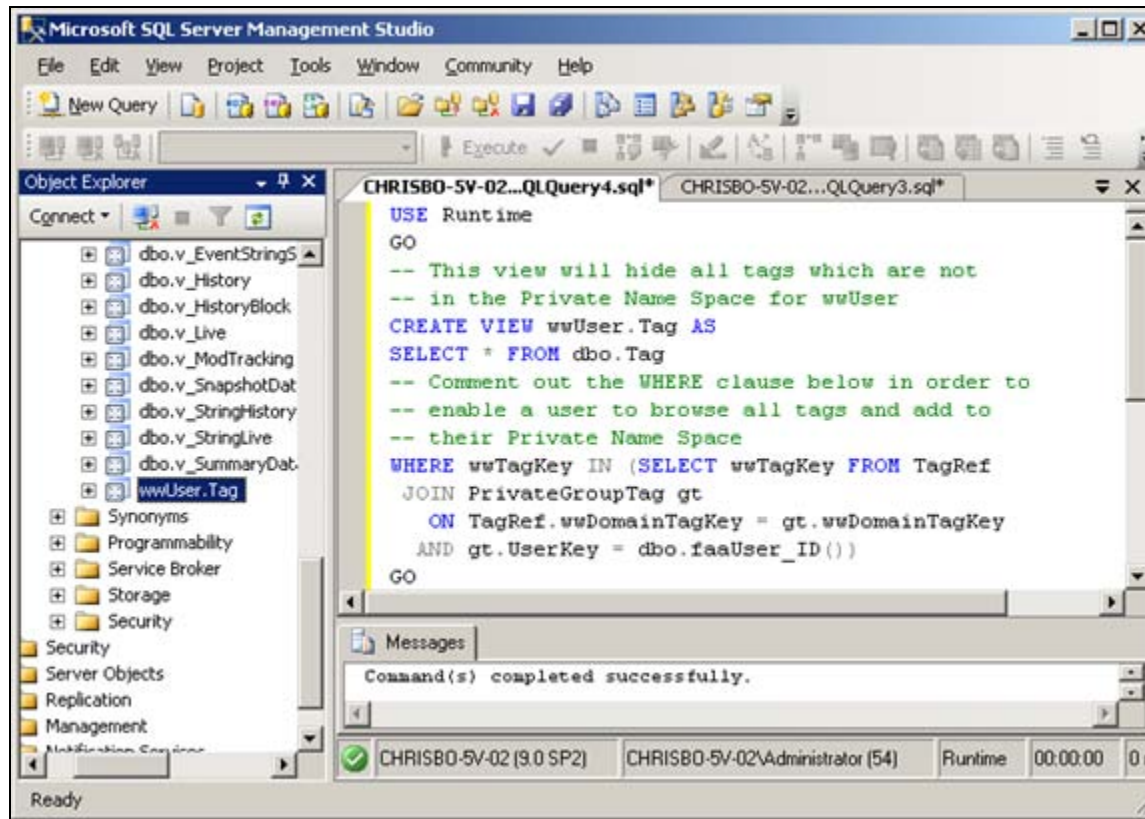


FIGURE 14: SQL QUERY AND RESULT SET

Figure 15 (below) shows the limited number tags available at the root level when connected as **wwUser**:

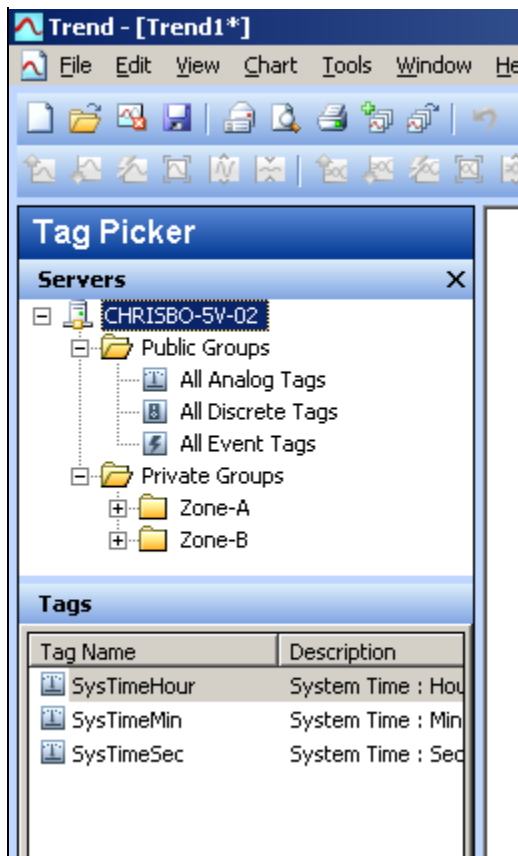


FIGURE 15: ROOT LEVEL SHOWING LIMITED NUMBER OF TAGS

**Note:** In order to show any additional tags in this list, they must be a part of the user's Private Groups NameSpace. However, in order to add tags to the Private Groups when they are restricted like this, you must either delete the view or comment out the WHERE clause as shown in Figure 14 above.

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