

# Microsoft Windows Authentication Technical Note for GTGS

## How to restrict user access to GeneChip® Targeted Genotyping Analysis Software version 1.5 (GTGS) using Microsoft Windows NT Authentication.

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### Default user access for GTGS (“DB authentication”)

Users are capable of running GTGS from any machine that can access the application home page using a web browser, provided that Java Runtime exists on that machine. However, running the software from a computer other than the TG Pre-Amp and Post-Amp Lab workstations is **NOT** supported by Affymetrix, and the application may not run properly.

When GTGS launches, users select their name from a pull-down menu (no password). In this configuration, certain database operations associate the currently-selected user to those operations for traceability purposes. Users themselves can create new users and inactivate old users as needed. This system assumes that users will log in as themselves. It does not prevent unauthorized users from accessing GTGS and its database.

### Windows NT authentication to limit user access to GTGS (“NT authentication”)

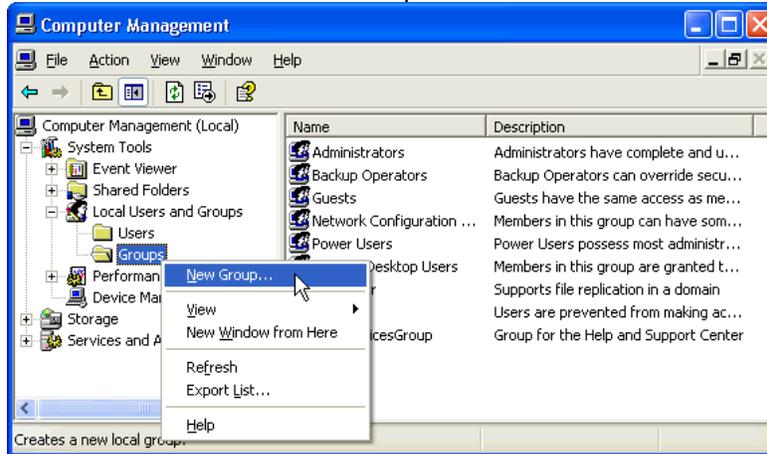
When GTGS launches, the software assumes the user is the username logged into the current Windows session. Users must select a username and enter a password when the computer starts up. In this configuration, application access is restricted in the following ways:

- You must create an NT user group called “GTGSusers”. Authorized users must be added or removed as necessary. Only GTGSusers and the database administrator have access to the GTGS database. GTGS will not launch unless run by an authorized NT user group member.
- You can use Windows security features to prevent unauthorized users from accessing computers logged in as an authorized user. For example, a password-protected screen saver can turn on after a period of inactivity. You can also ask users to log out of the current Windows session, so that at next use GTGS will track the activity of the correct user.

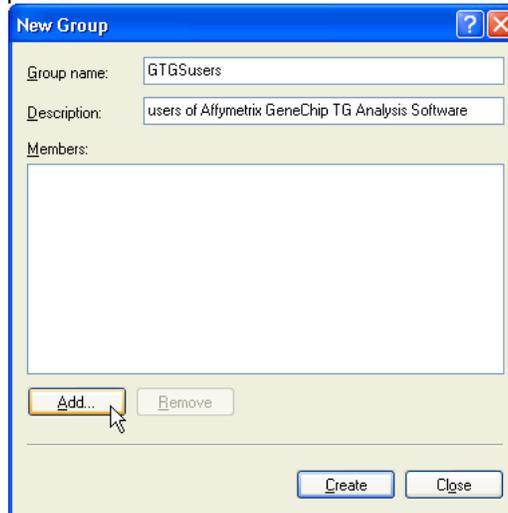
**NOTE: It is necessary to have local administrative rights to manage user accounts on the GTGS Pre- and Post-Amp Lab Workstations.**

## Configure GTGS to allow access only for specified Windows NT users

1. Obtain a list of Windows NT domain users who will need to access GTGS.
2. On the Post-Amp Lab workstation, log in as "Administrator" on "this computer".
3. Expand the Start Menu, right-click on My Computer, and select **Manage**.
4. Navigate to System Tools > Local Users and Groups.

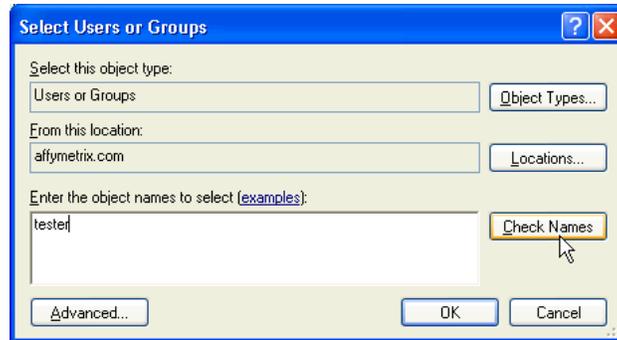


5. Right-click on Groups, and select **New Group...**
6. Create a new local user group named "GTGSusers". Enter this name into the Group name field. You may want to enter a description.

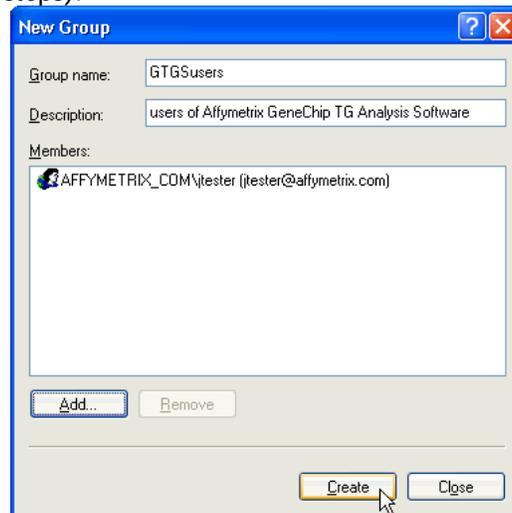


7. Click **Add...**

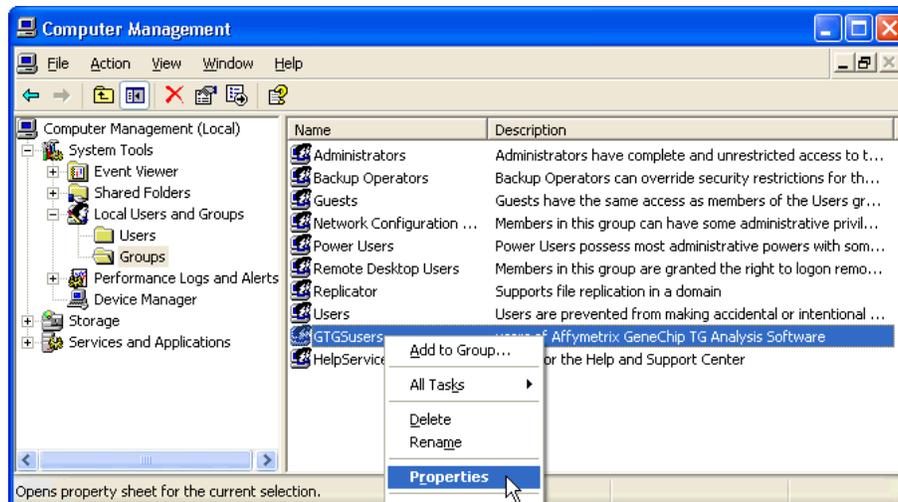
8. Add to this user group the NT users specified by the Customer. Click **Check Names** to verify the correct name has been entered.



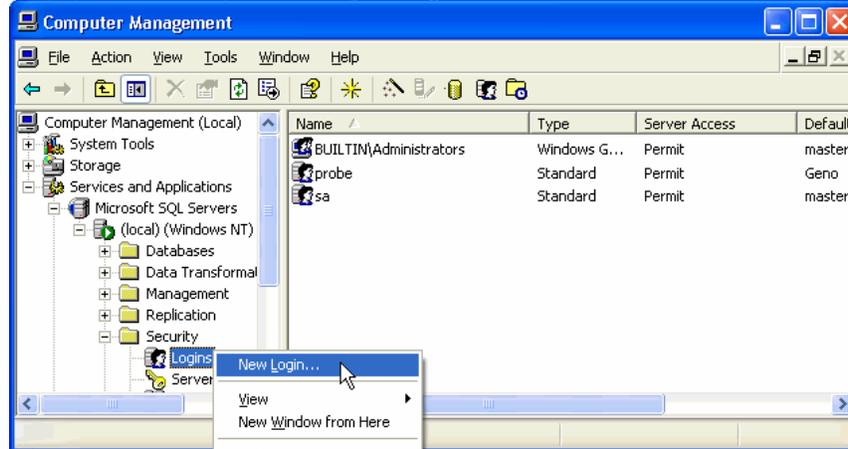
9. You will be asked to authenticate this action by entering a domain user name and password in the next window.
10. Add additional users, separating each name with a semicolon. Click **OK** when done.
11. Back in the New Group window, click **Create**, and then **Close** (but keep the Computer Management window open for the next steps).



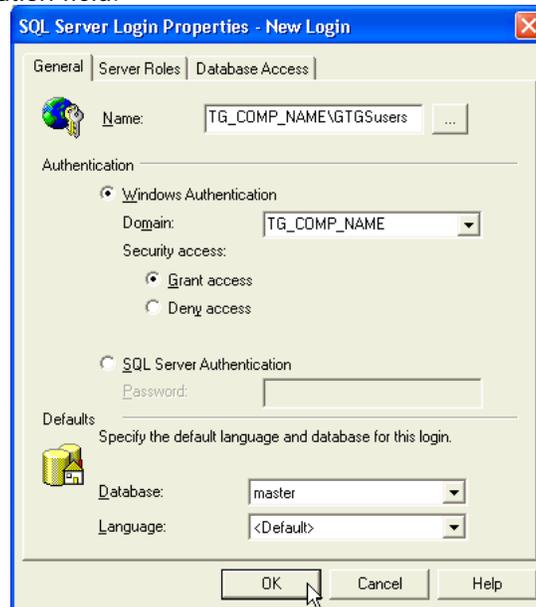
**NOTE:** User management is now performed by editing the members of the GTGSusers group:



12. In the Computer Management window, navigate to Services and Applications > Microsoft SQL Servers > (local) (Windows NT) > Security > Logins.

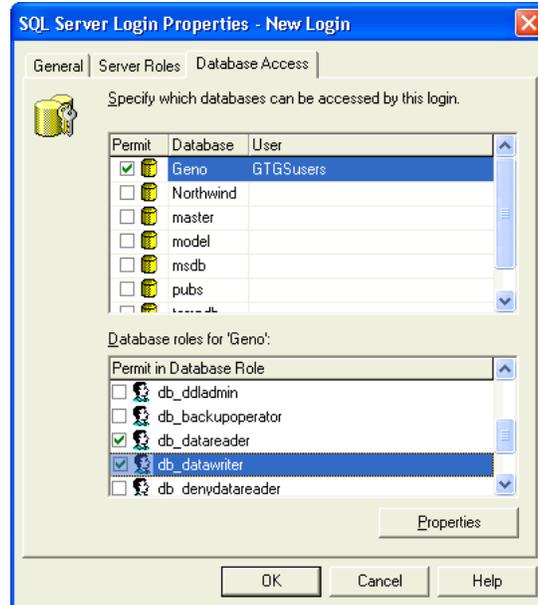


13. Right-click on the Logins icon and select **New Login...**
14. Enter "GTGSusers" into the Name field, or browse for the local user group that was created using the "..." button next to the Name field. Make sure the Windows Authentication and Grant Access are selected in the Authentication field.



**NOTE:** Select the Post-Amp Lab Workstation name in the Domain drop-down list, because the group is managed by this computer, not by the domain. For example, in the screenshot above, TG\_COMP\_NAME is the name of the workstation.

15. Switch to the Database Access tab.



16. Check the box next to the "Geno" database to allow this user to access Geno.

17. In the " Database roles for 'Geno' " area, check the boxes next to "db\_datareader" and "db\_datawriter" to allow this user group to edit the content of this database.

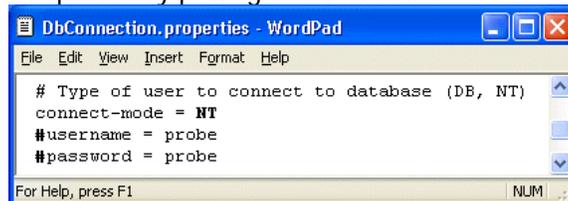
18. Click **OK** to save this new login.

19. Close the Computer Management window.

20. Navigate to **C:\Program Files\Apache Group\Tomcat 4.1\webapps\geno\config**

21. Open "**DbConnection.properties**" with WordPad.

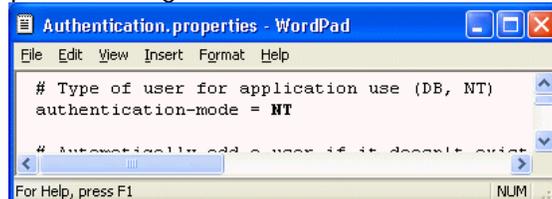
22. Within DbConnection.properties, change the "connect-mode" to "NT", and disable the username and password lines for the user "probe" by putting a # before them:



23. Save and close the file.

24. In the same folder, open "**Authentication.properties**" with WordPad.

25. Within Authentication.properties, change the "authentication-mode" to "NT":



**NOTE:** Authentication-mode defines how a user authenticates with the application on application launch. Connect-mode defines how the application authenticates with SQL to get access to the database.

26. Save and close the file.

## Verify that GTGS allows access only for specified Windows NT users

27. Log out of Windows.
28. Log into the domain as a domain user who is a member of the "GTGSusers" user group.
29. Launch [GeneChip Targeted Genotyping Analysis Software](#) from the application home page.
30. Verify that the application opens without any error messages, and with **NO** pull-down menu to select user names at startup.
31. Log out of Windows
32. Log into the domain as a domain user who is **NOT** a member of the "GTGSusers" user group.
33. Verify that the following error message appears:  
    **"java.sql.SQLException: [DataDirect][SQLServer JDBC Driver]Login failed for user '<username>'. Exception"**

This error message is correctly generated because SQL Server is not permitting the application to connect to the database, because the current Windows user is not a member of the GTGSusers group.

**NOTE:** The local administrator of the GTGS Post-Amp Lab Workstation will always be able to use GTGS, even if not added to the GTGSusers group. Consider adding a password for administrator accounts.