NetIQ Security Solutions for IBM i
Trinity Guard Product Suite
Installation and Configuration Guide 2.4

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What's New

Version 2.3 - TGProduct Installation
No major updates were made to the TGProduct installation this release.

TG Product Installation Introduction

The TG Product Installation Guide provides instructions on how to install TG products on the IBM i agent and TGCentral on Windows and Linux systems.

IBM i Agent Installation

This section includes the following topics:

- IBM i OS Instructions
- Agent Configuration

IMPORTANT: For the agent install to be successful, ensure the following:

USER PROFILE:

Ensure the individual performing the installation is assigned the user-class type ***SECOFR** and has the ability to grant the following authorities:

- *ALLOBJ
- *AUDIT
- *IOSYSCFG
- *JOBCTL
- *SAVSYS
- *SECADM
- *SERVICE
- *SPLCTL

SYSTEM VALUES:

Update the following system values:

- QALWOBJRST - Set to ***ALL** for restore of savefile, installation, upgrade, uninstallation, and hotfix installs
- QALWUSRDMN - Set to ***ALL** or add **TGPROD** to the list of libraries
- QFRCCVNRST - Set to **1** If you have issues restoring objects

RESTORE:

Use the following values during the restore of objects from the savefile:

- ALWOBJDIF - ***ALL**
- MBROPT - ***ALL**

See also

TG Product Installation Introduction

IBM i OS Instructions

Use this section to do the following:

- Install TG Products on IBM i Series Server
- Upgrade TG Products on IBM i Series Server
- Uninstall TG Products from IBM i Series Server

OS Requirements:

TG products are supported on the following IBM i OS versions:

- V6R1 (6.1)
- V7R1 (7.1)
- V7R2 (7.2)
- V7R3 (7.3)
- V7R4 (7.4)

> ⚠ **Important:** This product does not support the emulator (workstation) display size of 24x80. You must change the display to size to 27x132. If you do not change the display size, you will receive the error message **CPF4169**.

TGOwner Permissions:

TGOWNER will acquire the following permissions when the TGSuite is installed:

*ALLOBJ

*AUDIT

*IOSYSCFG

*JOBCTL

*SAVSYS

*SECADM

*SERVICE

*SPLCTL

TGOWNER will be assigned to the following user class:

*SECOFR

> ⚠ **Note**: These permissions ensure that TGOWNER had the necessary privileges.

See also

IBM i Agent Installation

Install TG Products on IBM i Series Server

Use this task to install the available TG products on an IBM i Series server. This task describes the following:

- Extract Installation Files
- Locate the Installation Program
- Log into FTP IBM i Server
- Transfer and Run Installation Program

Extract Installation Files

To extract the installation files

1) Locate the **TGINSTALL.zip**.

2) Save the zip file to the desired location on the server.

3) extract the files.

Locate the Installation Program

To Locate the SAVF file for install

1) Access the unzipped installation files.

2) Locate the **tginstall.savf** file.

Log into FTP IBM i Server

To log into the FTP IBM i server

1) At a Windows command prompt, enter the following:

   FTP ***<IBM i system name>***

2) Press **ENTER**.

Transfer and Run Installation Program

To FTP the files and run the installation program

At the FTP prompt, execute the following commands:

Command	Value
Change transfer mode to binary	BIN
Create save file on IBM i server	QUOTE RCMD CRTSAVF QGPL/TGINSTALL

Transfer tginstall.svf to IBM i server	PUT c:\<path to>\tginstall.savf QGPL/TGINSTALL
Restore TGINSTALL library	QUOTE RCMD RSTLIB TGINSTALL DEV(*SAVF) SAVF(QGPL/TGINSTALL) MBROPT(*ALL) ALWOBJDIF(*ALL)
Run installer	QUOTE RCMD TGINSTALL/TGINSTALL INSTYPE(*INSTALL) EULA(*ACCEPT) BATCH(*NO)

See also

IBM i OS Instructions

Upgrade TG Products on IBM i Series Server

Use this task to upgrade the available TG products on an IBM i Series server. This task describes the following:

- Extract Installation Files
- Locate SAVF File
- Log into FTP IBM i Server
- Transfer Installation Program
- Run Upgrade

Extract Installation Files

To extract the installation files

1) Locate the **tginstall.zip**.

2) Save the zip file to the desired location on the server.

3) extract the files.

Locate SAVF File

To locate the SAVF file

1) Access the unzipped installation files.

2) Locate the **tginstall.savf** file.

Log into FTP IBM i Server

To log into the FTP IBM i server

1) At a Windows command prompt, enter the following:

   FTP ***<IBM i system name>***

2) Press **ENTER**.

Transfer Installation Program

To transfer the installation file

At the FTP prompt, execute the following commands:

Command	Value
Change transfer mode to binary	BIN
Delete old save file on IBM i server	QUOTE RCMD DLTOBJ OBJ(QGPL/TGINSTALL) OBJTYPE(*FILE)
Create new save file on IBM i server	QUOTE RCMD CRTSAVF QGPL/TGINSTALL

Transfer tginstall.savf to IBM i server	PUT c:\<path to>\tginstall.savf QGPL/TGINSTALL

Run Upgrade

To run the upgrade

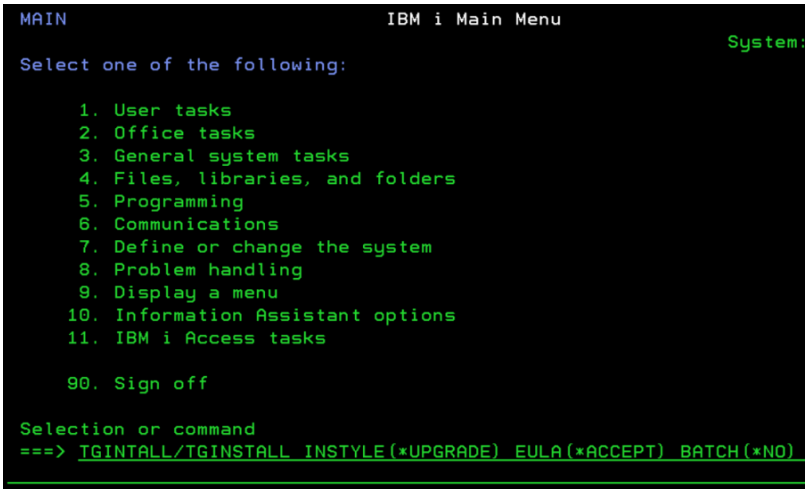
1) Sign into your IBM i server.

2) At the **Selection or command** prompt, enter **RSTLIB TGINSTALL DEV(*SAVF) SAVF(QGPL/TGINSTALL) MBROPT(*ALL) ALWOBJDIF(*ALL)**.

3) Press **Enter**.

4) At the **Selection or command** prompt, enter **TGINSTALL/TGINSTALL INSTYPE(*UPGRADE) EULA (*ACCEPT) BATCH(*NO)**.

5) Press **Enter**.



See also

IBM i OS Instructions

Uninstall TG Products from IBM i Series Server

Use this task to uninstall TG products from your IBM i Series server. This task describes the following:

- Log into the IBM i Server
- Remove the TG Product Files
- Delete the TGINSTALL Library
- Delete the TGOWNER Object
- Delete the TGAUTL Object

Log into the IBM i Server

To access the IBM i Main Menu

Sign into your IBM i server.

Remove the TG Product Files

To remove the TG product files

1) At the **Selection or command** prompt, enter **TGINSTALL/TGINSTALL INSTYPE(*REMOVE)**.

2) Press **Enter**.

Delete the TGINSTALL Library

To delete the TGINSTALL library

1) At the **Selection or command** prompt, enter **DLTLIB LIB(TGINSTALL)**.

2) Press **Enter**.

Delete the TGOWNER Object

To delete the TGOWNER object

1) At the **Selection or command** prompt, enter **DLTUSRPRF USRPRF(TGOWNER)**.

2) Press **Enter**.

Delete the TGAUTL Object

To delete the TGAUTL object

1) At the **Selection or command** prompt, enter **DLTAUTL AUTL(TGAUTL)**.

2) Press **Enter**.

See also

IBM i OS Instructions

Agent Configuration

This section includes the following topic:

Configure TGMenu

See also

IBM i Agent Installation

Configure TGMenu

Use this task to configure the TGMenu (which provides access to TGAudit, TGSecure, and TGDetect).

This task describes the following:

- Step 1 - Log In
- Step 2 - Add License Key
- Step 3 - Add Authorizing Users
- Step 4 - Configure NetServer to Enable Report Viewing
- Step 5 - Change Emulator Display Size
- Step 6 - Enabling Report Filter Modifications

See also

Agent Configuration

Step 1 - Log In

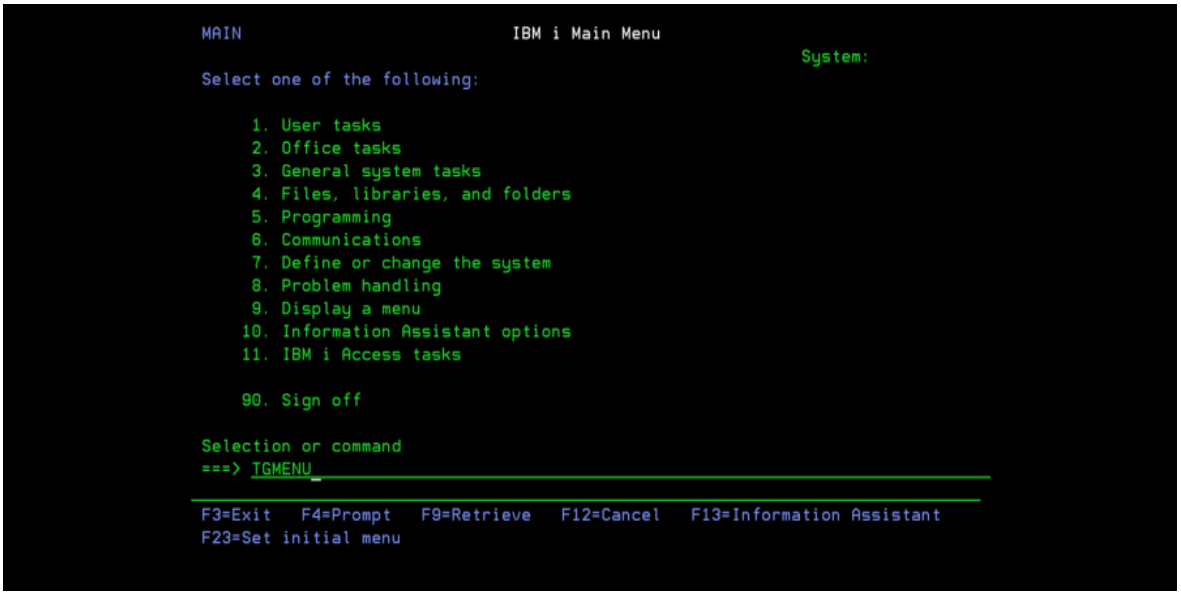
Use this task to log in from the **TG - Main** menu.

To access the TG Main menu

1) Sign into your IBM i server.

2) At the **Selection or command** prompt, enter **TGMENU**.

3) Press **Enter**. The **TG Main** menu is displayed.



See also

Configure TGMenu

Step 2 - Add License Key

Use this task to do the following:

- Obtain License Key
- Add License Key
- Display Product Version
- Display Product License Status

To use the product, you must have a valid license key. If a valid license key is not present, a message appears in the **System Operator** (QSYSOPR) message queue.

> **Note**: A 30-day trial license is provided at the time of installation, so you can immediately begin using the product, but if you purchased a license, add it immediately to avoid any issues.

Obtain License Key

To obtain a license key

1) Go to https://trinityguard.com/support/license-keys.

2) Complete and the online form.

3) Click **Submit**.

> **Note**: Trinity Guard will issue you a single license key. The key will provide access to all licensed TG products. See Display License Status for instruction on viewing the license status of available TG products.

Add License Key

To add a license key

1) Access the **TG Main** menu.

2) At the **Selection or command** prompt, enter **80** (Licensing Status).

4) Press **Enter**.

5) Press the **F6** (Add Key) function key on your keyboard.

6) Enter the license key.

7) Press **Enter**.

Display Product Version

To display product version

1) Access the **TG Main** menu.

2) At the **Selection or command** prompt, enter **80** (Licensing Status).

4) Press **Enter**.

5) Under **License Information**, see the **Product Version** field.

Display Product License Status

To display product license status

1) Access the **TG Main** menu.

2) At the **Selection or command** prompt, enter **80** (Licensing Status).

4) Press **Enter**.

5) Under **License Information**, see the product status (**Y** -licensed, **N** - not licensed).

See also

Configure TGMenu

Step 3 - Add Authorizing Users

Use this task to do the following:

- Display Authorized Users
- Add Authorized Users

> ⚠ **Important**: To use the product, the administrator must grant you access.

> ✓ **Tip**: If you are the administrator, don't forget to add yourself.

During installation, the following users are automatically authorized to use the product:

- QSECOFR
- The user profile that installed the product

Display Authorized Users

Use this task to display the list of current authorized users.

To display authorized users

1) Access the **TG Main** menu.

2) At the **Selection or command** prompt, enter **70** (Work with TG Product Users).

3) Press **Enter**. The **Edit Authorization List** interface displays.

Add Authorized Users

Use this task to add an authorized user.

To add authorized users

1) Access the **Edit Authorization List** interface.

2) Press the **F6** (Add new users) function key on your keyboard.

2) In the **User** column, enter the user profile of the user you want to add.

3) In the **Object Authority** column, enter ***ALL**.

4) Press **Enter** twice.

See also

Configure TGMenu

Step 4 - Configure NetServer to Enable Report Viewing

Use this task to configure a share drive on the NetServe. This allows the system to save and immediately display reports generated in HTML, XML, or CSV formats on your screen.

- Enable Additional Report Outputs
- Create Share Folder via System Navigator
- Restrict Permission to Share Folder via System Navigator
- Create Share Folder via Access Client Solutions (ACS)
- Restrict Permission to Share Folder via ACS
- Add IBM i Server to Host Table
- Map Network Drive to Share Folder

> ⚠ **Important**: Because this share folder stores report outputs, it is important to ensure permissions to the folder are restricted to only those individuals with appropriate job-related responsibilities.

Enable Additional Report Outputs

Use this task to enable the displaying of XML, HTML, and CSV formats of reports.

To enable displaying of report outputs

1) Start NetServer.

2) At an i5/OS command, enter the following:

   STRTCPSVR SERVER(*NETSVR)

3) Click **Enter**.

Create Share Folder via System Navigator

Use this task to create the share drive on which reports are to be saved.

To create a share folder on which to save the report outputs

1) Access the **System Navigator**.

2) Create a NetServer file share called **TrinityGuard**:

   System i Navigator [Your Connection] Network Servers TCP/IP

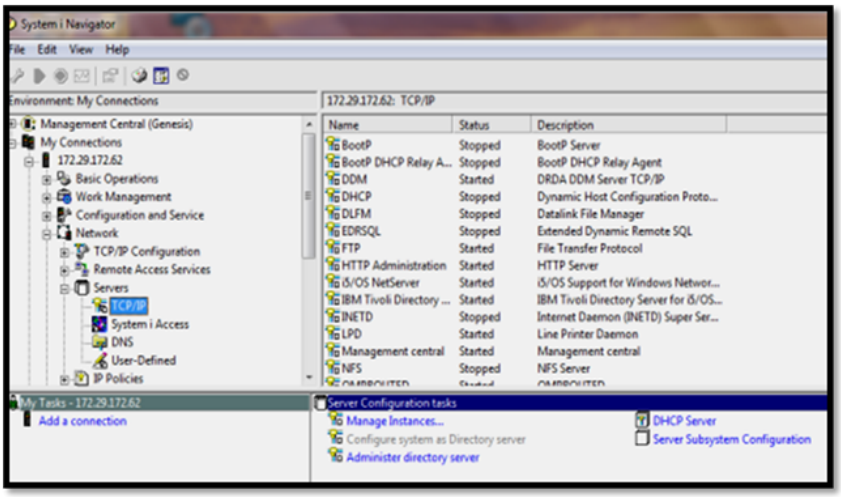


***Figure**: System i Navigator*

3) Right-click **i5/OS NetServer** and select **Open**.

4) Right-click **Shared Objects**, and select **New File**.

***300pxFigure**: i5/OS NetServer*

5) On the **General** tab, assign the new share the following attributes:

- Name: TrinityGuard
- Description
- Access level
- Maximum number of users
- Path name: **/TrinityGuard**

6) Click **OK**.

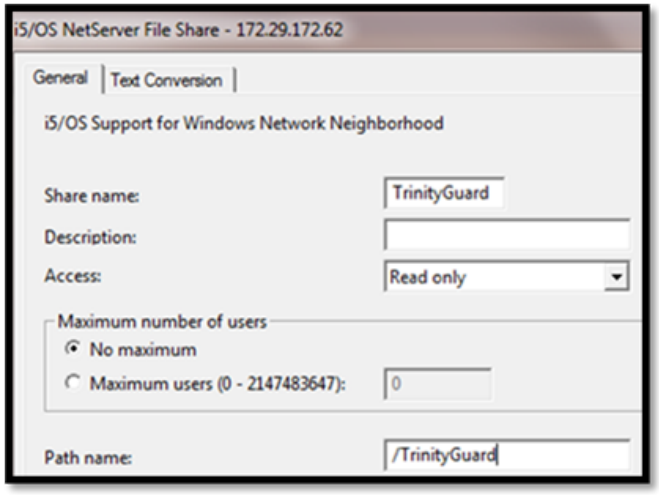


***Figure**: i5/OS NetServer File Share*

Restrict Permission to Share Folder via System Navigator

To restrict permission to the share folder

1) Right-click on the **TRINITYGUARD** share and select **Permissions**.

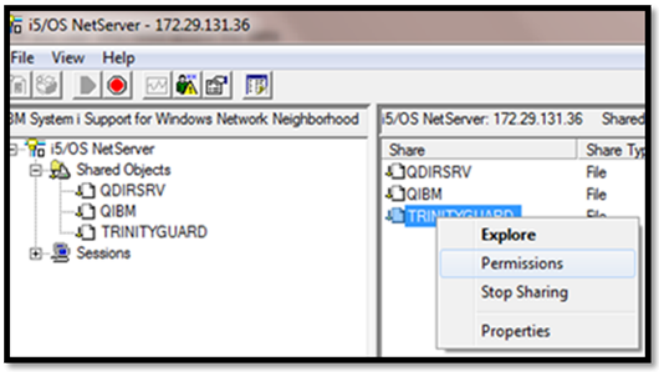


Figure: i5/OS NetServer

2) Click on the **Add** button:

3) Enter the profile name for the user you want to add.

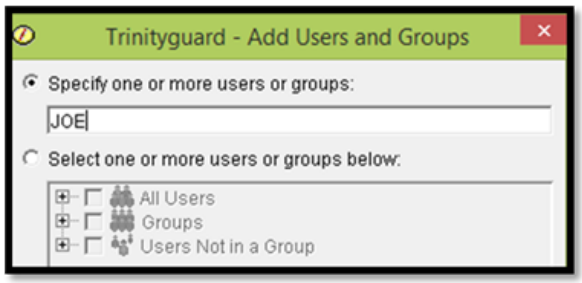


Figure: Trinityguard – Add Users and Groups

4) Click **OK**.

5) Set the permissions as follows:

Field	Read	Write	Execute	Management	Existence	After	Reference	Exclude
Public								
TGOWNER	X	X	X	X	X	X	X	
User/Group	X							

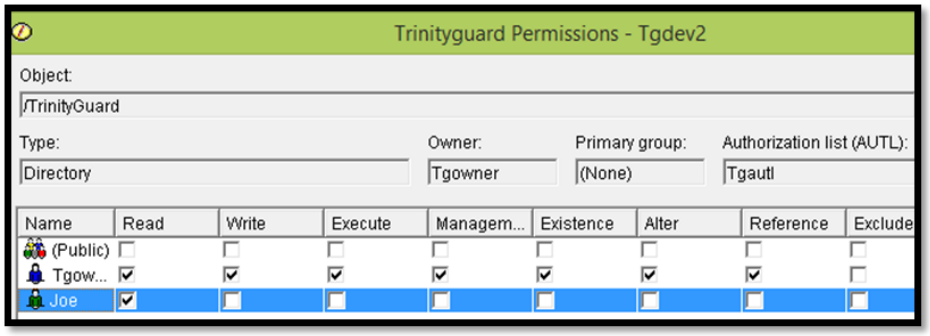


Figure: Trinityguard Permissions (System Navigator)

6) Click **OK**.

> **Tip**: By default, when a user is authorized to use the product through the green screen menu, they inherit permissions to this folder through the product authorization list.

Create Share Folder via Access Client Solutions (ACS)

1) Access the **IBM i Access Client Solutions**. ACS is what IBM is moving toward as a replacement for the older IBM i System Navigator for Windows (or Mac or Linux).

> **Tip**: This may require updating Java on your PC.

2) Select **Navigator for i**.

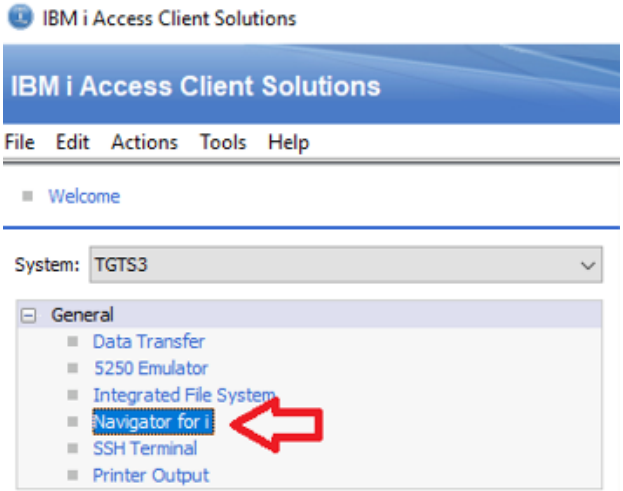


Figure: Navigator for i

3) Select **File Systems** in the left panel.

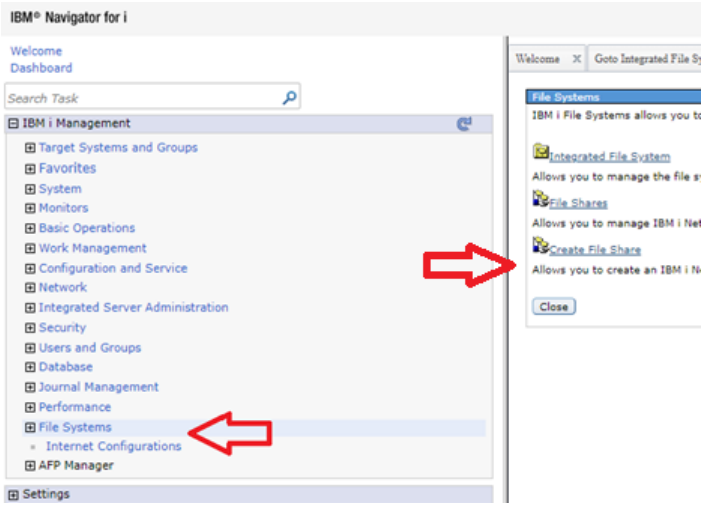


Figure: File Systems

4) Select **Create File Share** in the right panel. The **Trinityguard Properties** dialog appears.

5) Complete the following fields:

Field	Description
Share name	Trinityguard
Description	Trinityguard
Access	Read only
Path name	/TrinityGuard
Maximum number of users	No maximum

6) Click **OK**. The list of file shares appears.

Restrict Permission to Share Folder via ACS

To restrict permission to the share folder

1) Select the **Trinityguard** share.

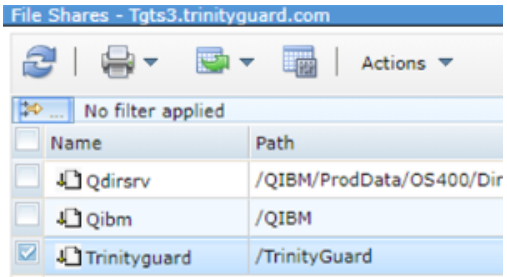


Figure: File Share

2) Click **Actions** on the menu bar.

3) Select **Permissions**.

4) Set the permissions as follows:

Field	Read	Write	Execute	Management	Existence	After	Reference	Exclude	From AUTL
Public									**X**
TGOWNER	**X**	**X**	**X**	**X**	**X**	**X**	**X**		

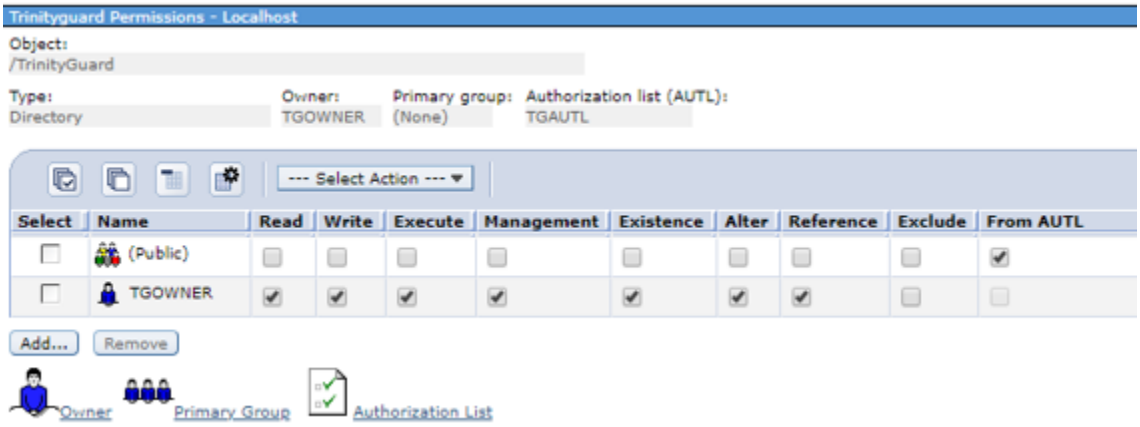


Figure: Trinityguard Permissions (ACS)

> **Tip**: If there are users that you need to add who you will exclude from the authorization list **TGAUTL**, add them now (either individually or as part of a group), and then grant them **Read** permissions.

Add IBM i Server to Host Table

To add IBM i server to the host table

Update the hosts table on your PC to include the IBM i server IP address and server name.

1) Open a text editor.

2) Edit the file C:\Windows\System32\drivers\etc\hosts:

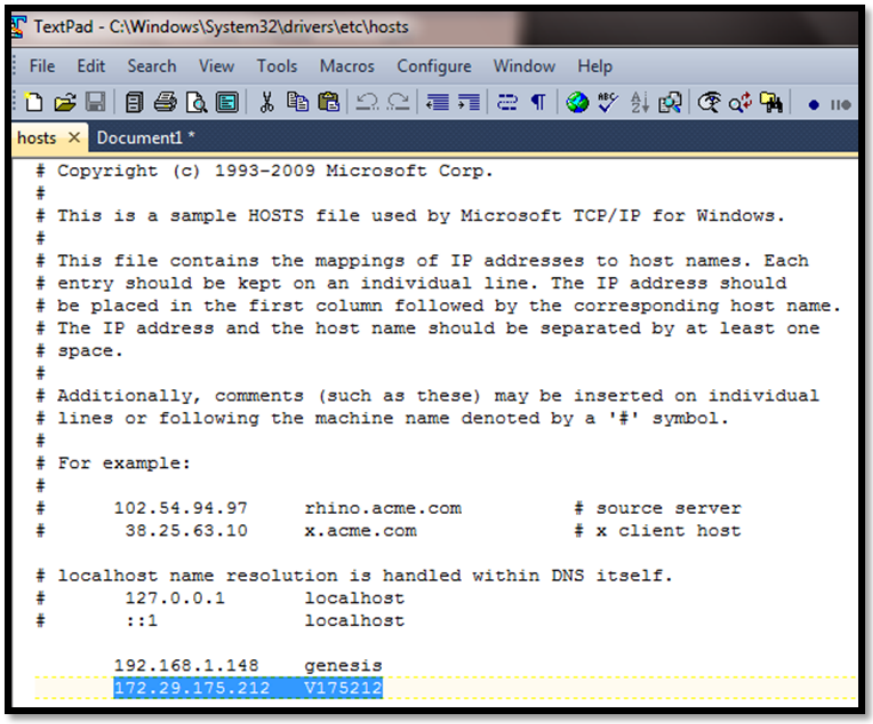


Figure: Host File

Map Network Drive to Share Folder

To map a network drive to the share folder

> **Note**: The specific steps for this task will vary based on your operating system, so use these instructions as a guide, not as an absolute.

1) Open **My Computer**.

2) Click on **Map network drive**.

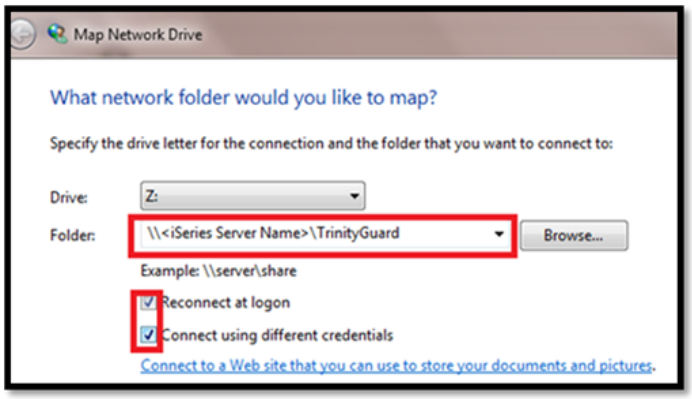


***Figure**: My Computer*

3) Select a drive letter.

4) Enter the path to the **TrinityGuard** share folder.

> ⚠ **Important**: Use the IBM i system name, not the IP address.

5) Select one of the following options:

- **Reconnect at logon**
- **Connect using different credentials**

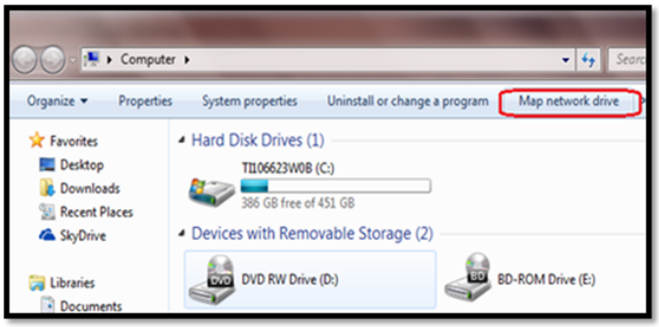


***Figure**: Map Network Drive*

6) Click the **Finish** button.

7) Enter your i5/OS user profile and password.

8) Select the **Remember my credentials** option.

9) Click **OK**.

***Figure**: Windows Security*

Alternatively, you can map the network drive from a Windows command prompt by using the following command: **NET USE * <IBM i Server Name>\TrinityGuard /USER:IBM i-username IBM i-password**

See also

Configure TGMenu

Step 5 - Change Emulator Display Size

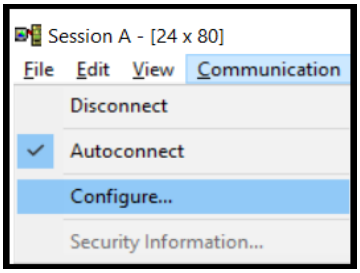
Use this task to change the emulator (workstation) display size to 27x132.

> ⚠ **Important:** This product does not support the emulator (workstation) display size of 24x80.

If you are not using the display size of 27x132, you will receive the error message **CPF4169**.

To change the emulator display size

1) From the IBM i session menu, click **Communication > Configure.**



2) In the **Type of emulation** group box, change **Size** to **27x132**.

3) Click **OK**.

See also

Configure TGMenu

Step 6 - Enabling Report Filter Modifications

Use this task to set the LMTCPM (Limited Capabilities) attribute to ***NO**.

> ⚠ **Important**: If this attribute is set to ***YES**, the user will have limited editing capabilities that might impact filtering.

To set the LMTCPM attribute to *NO

1) Access the **IBM i Main** menu.
2) At the **Selection or command** prompt, enter **3** (General system task)
3) Press **Enter**.
4) At the **Selection or command** prompt, enter **10** (Security)
5) Press **Enter**.
6) At the **Selection or command** prompt, enter **6** (Work with user profiles)
7) Press **Enter**.
8) In the **User profile** field, enter the desired user ID.
9) Press **Enter**.
10) In the **OPT** column beside the user ID, enter **2** (Change).
11) Press **Enter**. The **Change User Profile** interface is displayed.

Alternatively, use the **CHGUSRPRF** command to access this interface.

12) In the **Limit capabilities** field, enter ***NO**.
13) Press **Enter**.

See also

Configure TGMenu

Linux Agent Installation

Install Instructions

For Ubuntu/Debian

On Linux console run the following

1) wget https://repo.trinityguard.com/apt/trinityguard.gpg.key.

2) apt-key add trinityguard.gpg.key.

3) Add the following to /etc/apt/sources.list.

   deb [arch=amd64] https://repo.trinityguard.com/apt/ stable main

4) apt update

5) apt tgcentral

6) apt tgagentd

For Centos/RHEL

On Linux console run the following

1) Create file trinityguard.repo in directoryunder /etc/yum.repos.d with the following content

[repo.trinityguard.com]
name=Trinity Guard Repo
baseurl=https://repo.trinityguard.com/yum/$basearch/
enabled=1
gpgkey=https://repo.trinityguard.com/apt/trinityguard.gpg.key
gpgcheck=1
repo_gpgcheck=0

2) yum install tgcentral

3) yum install tgagentd

See also

Linux OS Instructions

Configuration

On Linux console run the following

1) edit file /opt/tgagent/etc/tgagent.conf and enter the following details

   TGAGENTHOME="/opt/tgagent"

   TGAGENTHOSTNAME="name of server"

   TGCENTRAL_URL=172.17.172.208:7444

   TGAGENTIP="agent ip"

2) Restart Agent by running

   systemctl restart tgagent

Central Installation

This section contains the following topics:

- Windows OS Instructions
- Linux OS Instructions
- TGCentral Configuration

Prerequisite:

- Google Chrome (latest version)

See also

TG Product Installation Introduction

Windows OS Instructions

Use this section to do the following:

- Install TGCentral on Windows Server
- Upgrade TGCentral on Windows Server
- Uninstall TGCentral from Windows Server

Minimum OS Requirements

- Windows 7 (or above)
- Windows Server 2008 (or above)

Minimum Hardware Requirements

- Storage 200GB space
- Memory 2GB memory
- Processor 64bits Intel Core i5 (or above) Xeon

See also

Central Installation

Install TGCentral on Windows Server

Use this task to install TG Central on a Windows server. This task describes the following:

- Step 1 - Upload Compressed Installation File to Server
- Step 2 - Run the Installation Program

Step 1 - Upload Compressed Installation File to Server

To upload the compressed installation file to server

1) Locate the **tgcentral-xxx.exe**.

2) Use whatever method or tool you have available to upload the file to the Windows server.

Step 2 - Run the Installation Program

Use this task to run the installation program.

To run the installation program

1) Navigate to the location of the extracted installation files.

2) Right-click on the **tgcentral-xxx.exe** program.

3) Select **Run as Administrator**.

4) Follow the instructions provided in the wizard.

> **Note**: On completion of the installation, you will receive a notification. The notification displays the URL from which you need to complete the product configuration. You can also enter the URL manually into your browser (http://<ip address>:10000).

> **Tip**: If you are given the option to select a browser, select Chrome. Chrome is required for the product configuration.

See also

Windows OS Instructions

Upgrade TGCentral on Windows Server

Use this task to upgrade TGCentral from a Windows Server.

Follow the Windows installation instructions.

The installer detects the previous version and proceeds to make the necessary updates.

See also

Windows OS Instructions

Uninstall TGCentral from Windows Server

Use this task to uninstall TGCentral from a Windows Server.

To uninstall TGCentral

1) Access the location of the TGCentral program files.

> **Note**: Unless the default path was changed at the time of installation, the files are commonly installed at c:\program files(x86)\TGcentral.

2) Right-click on the **tgcentral-uninstall.xxx.exe** program (where xxx is the version number).

3) Select **Run as Administrator**.

3) Follow the instructions provided in the wizard.

> **Tip**: You can also use the uninstall feature available through the Windows menu or the **Control Panel**.

See also

Windows OS Instructions

Linux OS Instructions

Use this section to do the following:

- Install TGCentral on Linux Server
- Upgrade TGCentral on Linux Server
- Uninstall TGCentral from Linux Server
- Check Status of TGCentral Installation on Linux Server
- Manage TGCentral Services on a Linux Server

Minimum OS Requirements

- RedHat 6 (or above)
- CentOS 6 (or above)
- Fedora 13 (or above)
- Debian 7 (or above)
- Ubuntu 12 (or above)

Minimum Hardware Requirements

- Storage 200GB space
- Memory 2GB memory
- Processor 64bits Intel Core i5 (or above) Xeon or ppc64le

See also

Central Installation

Install TGCentral on Linux Server

Use this task to install TGCentral on a Linux server. This task describes the following:

- Step 1 - Upload TGCentral Installation File to Linux Server
- Step 2 - Run the TGCentral Installation on the Linux Server

Step 1 - Upload TGCentral Installation File to Linux Server

To upload the installation file

1) Locate the installation file (where xxx is the version number).

2) Use whatever method or tool you have available to upload the file to the Linux server.

Step 2 - Run the TGCentral Installation on the Linux Server

To run the installation

1) Navigate to the location on the server where the TGCentral installation files are stored.

2) At the command prompt, enter the following command for your distribution type:

Distribution Type	Command
Red Hat (Fedora/Centos)	rpm -i tgcentral.rpm
Debian (Ubuntu)	dpkg -i tgcentral.deb

3) Press **Enter**.

> **Note**: On completion of the installation, you will receive a notification. The notification will display the URL from which you will need to complete the product configuration. You can also enter the URL manually into your browser (http://<ip address>:10000).

See also

Linux OS Instructions

Upgrade TGCentral on Linux Server

Use this task to upgrade the TGCentral on a Linux server.

To upgrade TGCentral

1) Navigate to the location on the server where the TGCentral installation files are stored.

2) At the command prompt, enter the following command for your distribution type:

Distribution Type	Command
Red Hat (Fedora/Centos)	rpm -U tgcentral.rpm
Debian (Ubuntu)	dpkg -i tgcentral.deb

3) Press **Enter**.

See also

Linux OS Instructions

Uninstall TGCentral from Linux Server

Use this task to uninstall TGCentral from a Linux Server.

To uninstall TGCentral

1) Navigate to the location on the server where the TGCentral installation files are stored.

2) At the command prompt, enter the following command for your distribution type:

Distribution Type	Command
Red Hat (Fedora/Centos)	rpm -e tgcentral
Debian (Ubuntu)	dpkg -P tgcentral

3) Press **Enter**.

See also

Linux OS Instructions

Check Status of TGCentral Installation on Linux Server

Use this task to check the status of the TGCentral installation on a Linux server.

To Check Status of TGCentral Install

1) Navigate to the location on the server where the TGCentral installation files are stored.

2) At the command prompt, enter the following command for your distribution type:

Distribution Type	Command
Red Hat (Fedora/Centos)	rpm -q tgcentral
Debian (Ubuntu)	dpkg -s tgcentral

3) Press **Enter**.

See also

Linux OS Instructions

Manage TGCentral Services on a Linux Server

Use this task to do the following:

- Start TGCentral Services on a Linux Server
- Stop TGCentral Services on a Linux Server
- Restart TGCentral Services on a Linux Server
- Check Status of TGCentral Services on a Linux Server

Start TGCentral Services on a Linux Server

To Start TGCentral Services on a Linux Server

1) Navigate to the location on the server where the TGCentral installation files are stored.
2) At the command prompt, enter the following command: **systemctl start tgcentral**.
3) Press **Enter**.

Stop TGCentral Services on a Linux Server

To Stop TGCentral Services on a Linux Server

1) Navigate to the location on the server where the TGCentral installation files are stored.
2) At the command prompt, enter the following command: **systemctl stop tgcentral**.
3) Press **Enter**.

Restart TGCentral Services on a Linux Server

To Restart TGCentral Services on a Linux Server

1) Navigate to the location on the server where the TGCentral installation files are stored.
2) At the command prompt, enter the following command: **systemctl restart tgcentral**.
3) Press **Enter**.

Check Status of TGCentral Services on a Linux Server

To Check Status of TGCentral Services on a Linux Server

1) Navigate to the location on the server where the TGCentral installation files are stored.
2) At the command prompt, enter the following command: **systemctl status tgcentral**.
3) Press **Enter**.

See also

Linux OS Instructions

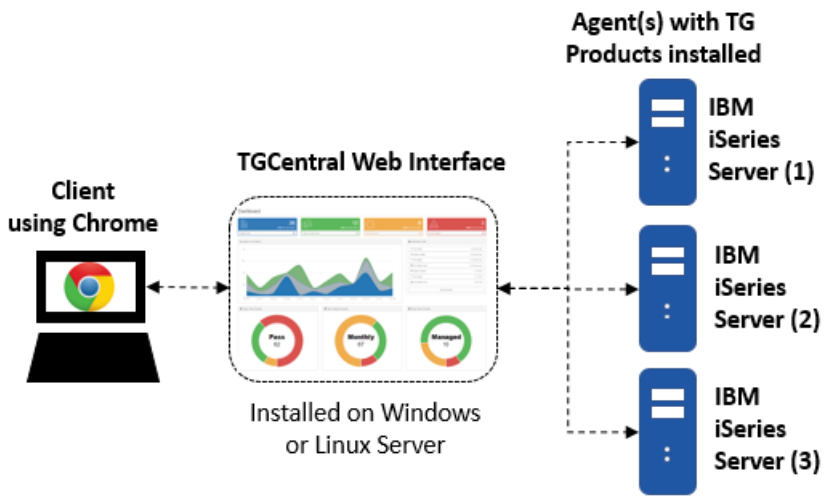
TGCentral Configuration

Use this task to configure TGCentral after installation on either a Windows or Linux server.

This section includes the following topics:

- IBM Agent Configuration
- Web Client Configuration

The configuration process involves modifications to the agent (IBM i server) as well as to TGCentral (web interface).



Web Client	IBM Agent

See Web Client Configuration for more information. **Prerequisite** • Google Chrome (latest version) **OS Requirements** Linux • RedHat 6 (or above) • CentOS 6 (or above) • Fedora 13 (or above) • Debian 7 (or above) • Ubuntu 12 (or above) Windows • Windows 7 (or above) • Windows Server 2008 (or above) **Minimum Hardware Requirements** • Storage 200GB space • Memory 2GB memory • Processor 64bits Intel Core i5 (or above) Xeon or ppc64le	See IBM Agent Configuration for more information. **Required Programs** • 5770SS1 Option 30 (Qshell) • 5770SS1 Option 33 (PASE) • 5733OPS (Open source for IBM i) Options *BASE • 5733OPS (Open source for IBM i) Options 2 • 5733OPS (Open source for IBM i) Options 4 • 5770DG1 IBM HTTP Server for i • 5733SC1 OpenSSH, OpenSSL, zLib Option 1 **Required PTFs** • SF99225 (If on IBM i 7.3) • SF99223 (If on IBM i 7.2) • SF99123 (If on IBM i 7.1)

TGCentral Installation

Download and install all required licensed programs and PTFs prior to attempting the configuration.

> ⚠ **Note**: The only third-party components provided with the TG Product installation are the python modules, which require a licensed version of python.

See also

IBM Agent Configuration

Web Client Configuration

IBM Agent Configuration

- Step 1 - Display agent details
- Step 2 - Set Agent Status to Active
- Step 3 - Resolve Agent Pre-requisite Issues
- Step 4 - Install Python packages
- Step 5 - Inform Agent of TGCentral IP Address

Step 1 - Display agent details

Use this task to display the status of the agent.

To display agent details

1) Sign into IBM i.

2) At the **Selection or command** prompt, enter **TGMENU** to access the **TG Main** menu.

3) At the **Selection or command** prompt, enter **10** (TGCentral Configuration). The **TGCentral Configuration** interface is displayed.

4) Review the agent installation and configuration details.

Field	Description
Agent Subsystem Status	Status of the TGCentral communication subsystem TGCMN (in library TGPROD) necessary for TGCentral to communicate with the IBM i agent: ***ACTIVE** - Communication subsystem is active ***INACTIVE** - Communication subsystem is inactive
Pre-requisite Software Installed	Status of the pre-requisite software necessary for TGCentral to communicate with the IBM i agent: ***NO** - pre-requisite software not installed ***YES** - pre-requisite software installed
Pre-requisite modules Installed	Status of the pre-requisite modules necessary for TGCentral to communicate with the IBM i agent: ***NO** - pre-requisite modules not installed ***YES** -pre-requisite modules installed
TGCentral IP Address	IP address of the TGCentral server communicating with the IBM i agent
TGCentral Server Name	Name of the TGCentral server communicating with the IBM i agent
Communication Port	Port used by the TGCentral server to communicate with the IBM i agent **Tip:** IBM i communication is performed via Port 7444. You can change the port if required. Uses port 80 (non-ssl) or 443 (SSL). This can be changed as well via the tgcentral.conf file. The configuration file is located at the installation root directory (the Windows default install path is c:/program files/tgcentral).

SSL Enabled	**TRUE** - SSL is enabled **FALSE** - SSL is disabled **Tip**: The protocol used depends on the IBM open SSL library (5733-SC1) you install. PTF level and details are described in the IBM community wiki https://www.ibm.com/developerworks/community/wikis/home?lang=en#!/wiki/W1c12c273752d_4cb8_b000_8375ec43426d/page/OpenSSL PCI Compliance].
Send Incoming Transactions	Flag indicating whether TGSecure incoming transactions are sent to TG Central in real-time ***YES** - Enabled sending of incoming transaction ***NO** - Disable sending of incoming transactions **Note**: ***NO** is the default setting.
Send TGDetect Alerts	Flag indicating whether TGDetects alerts are sent to TG Central in real-time ***YES** - Enabled sending of alerts ***NO** - Disable sending of incoming transactions **Note**: ***NO** is the default setting.
Log Status	Identifies the level of detail used to create the log: **CRITICAL** - log only critical errs **ERROR** - log all errors **WARNING** - log warning and errs **INFO** - log info, warning, and errs **DEBUG** - log everything (Note: This level of detail will take the most system resources to generate.) **Tip**: The log file is stored at TrinityGuard/Agent directory.

Step 2 - Set Agent Status to Active

Use this task to set the status of the agent to *ACTIVE. Only active agents are detected (seen) by TGCentral. An agent must be active for you to begin managing it using TGCentral.

To set agent status to active:

1) Access the **TGCentral Configuration** interface (option 10).

2) Update the Agent Configuration section with the TGCentral server data IP address.

3) Press the **F24** (Update Config) function key.

4) Press the **F22** (Start Agent) function key.

Step 3 - Resolve Agent Pre-requisite Issues

Use this task to identify issues with pre-requisites (i.e., software and modules). This step is only necessary if pre-requisites are missing (Status = ***NO**.)

To resolve agent pre-requisite Issues:

1) Access the **TGCentral Configuration** interface.

2) Press the **F20** (Pre-requisite Status) function key. The **TGCentral Pre-requisite Status** interface is displayed.

3) Do the following as necessary for your specific installation case:

If	Then

Your installation cannot locate the pre-requisite module(s)	Press the **F20** (Install Pre-requisite Modules) function key to attempt to locate the files
Your installation cannot locate the XML Service(s)	Press the **F21** (Install Pre-requisite Modules) function key to attempt to locate the files
Your installation cannot locate the pre-requisite software	Press the **F22** (Install Pre-requisite Software) function key to attempt to locate the files

Tip: For function keys higher than F12, you must use a combination of the **Shift** key and the appropriate function key. For example, to select **F20**, you must hold down the **Shift** key and F8.

4) Follow the instructions provided on each screen.

5) Ensure that the following license programs are installed via command **DSPSFWRSC**.

Option	Description	Installation Status
a	5770SS1 Option 30 (Qshell)	*YES
b	5770SS1 Option 33 (PASE)	*YES
c	5733OPS (Open source for IBM i) Options *BASE	*NO
d	5733OPS (Open source for IBM i) Options 2	*NO
e	5733OPS (Open source for IBM i) Options 4	*NO
f	RPM Framework	*NO
g	RPM Packages	*NO
h	Group PTFs for Open Source	*NO
i	5770DG1 IBM HTTP Server for i	*YES
j	5733SC1 OpenSSH, OpenSSL, zLib Option 1	*YES
k	Pre-Requisite Modules	*NO

Tip: If the license programs are missing, download and install them from the **Entitled Systems Support** website http://www-304.ibm.com/servers/eserver/ess/index.wss.

- Go here for instructions on installing any missing open source RPM files: http://ibm.biz/ibmi-rpms.
- We recommend that you use **Access Client Solutions** (ACS) to install the RPM support.
- Go here for ACS tech notes: **Getting started with Open Source Package Management in IBM i ACS:** https://www-01.ibm.com/support/docview.wss?uid=nas8N1022619.
- Go here for IBM i box ssh configuration instructions: **IBM i Open SSH & Open SSL Community:** https://www.ibm.com/developerworks/community/groups/service/html/communityview?communityUuid=38f2c9b4-5ddb-485f-b3e9-37e520a3fd82

6) Ensure that the following group PTFs are installed via command **WRKPTFGRP**.

- SF99225 (If on IBM i 7.3)
- SF99223 (If on IBM i 7.2)

- SF99123 (If on IBM i 7.1)

> **Tip**: If the PTFs files are missing, download and install them from the **IBM Fix Central** website https://www-945.ibm.com/support/fixcentral.

Alternatively, the following PTFs are installed for license program 5733OPS via command **DSPPTF**.

- SI59035
- SI60567
- SI60568

> **Tip**: Download required PTFs via IBM Fix Central website https://www-945.ibm.com/support/fixcentral.

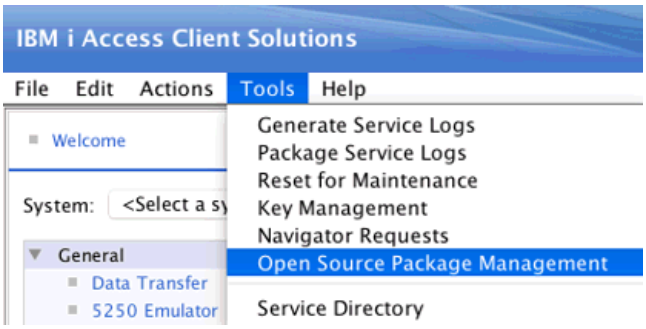
Step 4 - Install Python packages

Use this task to install the Python packages.

To install Python packages:

1) Access the **IBM i Access Client Solution** interface.

2) On the menu bar, choose **Tools > Open Source Package Management**.



> **Note**: The list of currently installed open source packages are displayed.

3) Click the **Available packages** tab.

> **Note**: The list of packages available for installation is displayed.

4) Select the following packages:

Package	Version	System
Python3	3.6.8-1	IBM
Python3-ibm db	2.0.5.9-0	IBM
Python3-idna	2.8-0	IBM
Python3-itoolkit	1.6.1-0	IBM

Python3-pip	9.0.1-2	IBM
Python3-setuptools	36.0.1-2	IBM
Python3-six	1.10.0-0	IBM
Python3-wheel	0.29.0-2	IBM

5) Click the **Install** button.

> **Note**: The installation confirmation screen is displayed.

6) Enter **Y** at the command prompt to confirm.

Step 5 - Inform Agent of TGCentral IP Address

Use this task to inform the agent of the TGCentral IP address. Once you established this connection, the agent can begin communicating with TGCentral.

To enter the TGCentral IP Address:

1) Access the **TGCentral Configuration** interface.

2) In the **TGCentral IP Address** field, enter the IP address at which TGCentral Web interface is currently installed.

Use this task to identify issues with pre-requisites (i.e., software and modules). This step is only necessary if pre-requisites are missing (Status = ***NO**.)

See also

TGCentral Configuration

Web Client Configuration

- Step 1: Access TGCentral IP address
- Step 2: Create TGCentral administrator login
- Step 3: Review TGCentral configuration details

Step 1: Access TGCentral IP address

Use this task to access TGCentral.

> **Tip**: Use Chrome as your browser to configuration TGCentral.

To access the TGCentral IP Address

1) Launch Chrome.

2) Enter IP address at which TGCentral is installed in the address bar (e.g., **http://<ip address>:10000**).

Step 2: Create TGCentral administrator login

Use this task to create an admin login. The system automatically adds the admin (who has the highest level of permissions) as the first user. It is then the responsibility of the admin to add additional users as necessary.

To create an admin login

1) From the **Configuration** tab, complete the required fields.

– Email

– Username

– Full name

– Password

– Confirm password

2) Click **Next**.

Step 3: Review TGCentral configuration details

Use this task to verify the configuration settings before launching the product.

To review the configuration settings

1) Using the **Overview** tab, review the configuration details.

> **Tip**: If you need to make modifications, click the **Previous** button.

2) Click **Save Configuration**.

See also

TGCentral Configuration

APPENDICES

- APPENDIX - Libraries and Commands
- APPENDIX - TGInstall Revisions
- APPENDIX - TGCentral FAQs
- APPENDIX - TGFix

APPENDIX - Libraries and Commands

Go here: Libraries and Commands

APPENDIX - TGInstall Revisions

This section includes enhancement by version.

- Version 2.3 - TGProduct Installation
- Version 2.2 - TGProduct Installation
- Version 2.1 - TGProduct Installation

Version 2.3 - TGProduct Installation

No major updates were made to the TGProduct installation this release.

Version 2.2 - TGProduct Installation

The following commands are now available to improve the installation process for Linux implementations:

> **Note**: The rpm commands apply to Red Hat (Fedora and CentOS) and the deb commands apply to Debian (Ubuntu and other distributions based on Debian).

Action	Red Hat	Debian
Install	rpm -i tgcentral.rpm	dpkg -i tgcentral.deb
Upgrade	rpm -U tgcentral.rpm	dpkg -i tgcentral.deb
Uninstall	rpm -e tgcentral	dpkg -P tgcentral
Check Install	rpm -q tgcentral	dpkg -s tgcentral
Start Service	systemctl start tgcentral	systemctl start tgcentral
Stop Service	systemctl stop tgcentral	systemctl stop tgcentral
Restart Service	systemctl restart tgcentral	systemctl restart tgcentral
Check Status	systemctl status tgcentral	systemctl status tgcentral

Version 2.1 - TGProduct Installation

IBM changed the way open source packages are distributed; therefore, additional details and resources are now provided in the instructions for the following task:

- Resolve Agent Pre-requisite Issues

APPENDIX - TGCentral FAQs

Go here: TGCentral FAQs

APPENDIX - TGFix

The **TG Fix** tool allows you to install fixes via the TG menu quickly and easily. This feature also includes verification features that ensure the fix is installed properly.

See also

Working with TG Fix