TruGate

Authentication Framework with Windows Logon Module

User's Guide

Rev. 1.0.5

D.O.I-Net Co., Ltd.

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Revision History

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1.0.0	2010/11/11	Issued.
1.0.1	2012/04/17	Removed Windows 2000 from Supported OSs due to a version up.
1.0.2	2013/05/09	Added Windows 8, Windows Server 2012 to Supported OSs. Changed Trial Period.
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1.0.4	2015/07/20	Added Windows 10 to Supported OSs. Added description of ODBC.
1.0.5	2023/11/07	Changed Supported OSs.

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1. Introduction

This User's Guide explains the operation of TruGate and its Configuration utility produced by D.O.I-Net Co., Ltd. (D.O.I-Net).

2. Operating Conditions

a. Supported OSs

Windows 10 32bit/64bit

Windows 11

Windows Server 2016

Windows Server 2019

b. Applicable Authentication Devices

Depends on Device Plug-in

c. Necessary Device Plug-ins

Use at least one of the following Device Plug-ins that matches with a certification device.

Generic USB Flash Device Plug-in ver.5.0.10

PC/SC Light Edition Device Plug-in ver.5.0.10

d. Installation Requirements

① Authentication device and its device plug-in(s) mentioned above should be installed in advance.

② Complete installing and preparing the authentication device to be used.

e. Operational Requirements

① ”To use this computer, it requires users to type a user account name and password” should be valid in the user property.

② Password input field should not be left empty.

3. Product Summary

a. Contents of Product

TruGate contains Windows Logon Module and Configuration Utility.

i. Windows Logon Module

Windows Logon Module (TruStack Gina) performs Windows Logon and Workstation Unlock with the device authentication, instead of passwords.

ii. **Configuration Utility**

Configuration utility handles the configurations of authentication devices, template enrollment, password registration, user registration/unregistration, Windows Logon Module, etc.

b. **Package**

2 types of installer packages are prepared; one for PCs with a single license edition, and another for PCs with a volume license edition.

i. **Single License Edition**

This is a package mainly for personal users. It comes with the exe installer package. The trial period is 1 month. No restrictions are set during the trial period.

ii. **Volume License Edition**

This is a package mainly for corporate users. It comes with the msi installer package. You cannot uninstall it from "Apps and Features" of the OS installed on the PC. Uninstall it from “Active Directory server” or “re-launched msi installer”. Either 32bit version or 64bit version is available. The trial period is 3 months. No restrictions are set during the trial period.

4. Warnings

1. Never use this with a Windows Logon handling application supplied by other vendors.
2. USB keys mentioned herein mean the generic USB flash memory, etc.
3. Never install a single license edition and a volume license edition together on the same PC.

5. Installation and Uninstallation Procedure

Note: Please check the Installation Requirements before installing TruGate. In installing and uninstalling, please log on with the administrator privilege of the local computer.

a. **Installation**

A dialog box shown below appears when you execute TruGate Trusted Stackware Windows Logon Module.exe. Click the "Next" button.

Figure 1 Setup Wizard Welcome Dialog Box

Read "SOFTWARE LICENSE AGREEMENT" shown in the dialog box carefully, and click the "I accept the terms in the license agreement" radio button if you agree, then click the "Next" button.

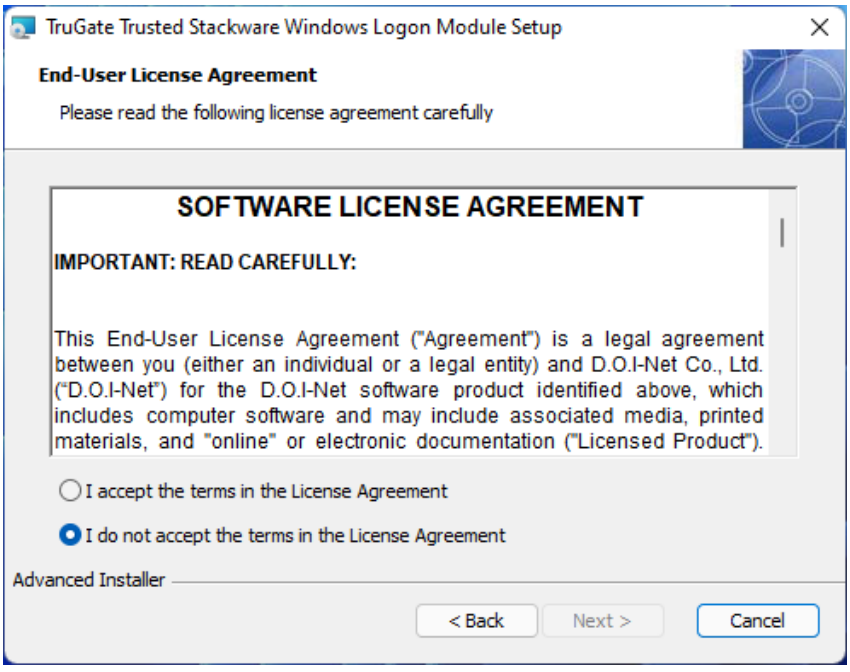

Figure 2 SOFTWARE LICENSE AGREEMENT

When the Setup Type dialog box is displayed, select the setup type according to your usage environment.

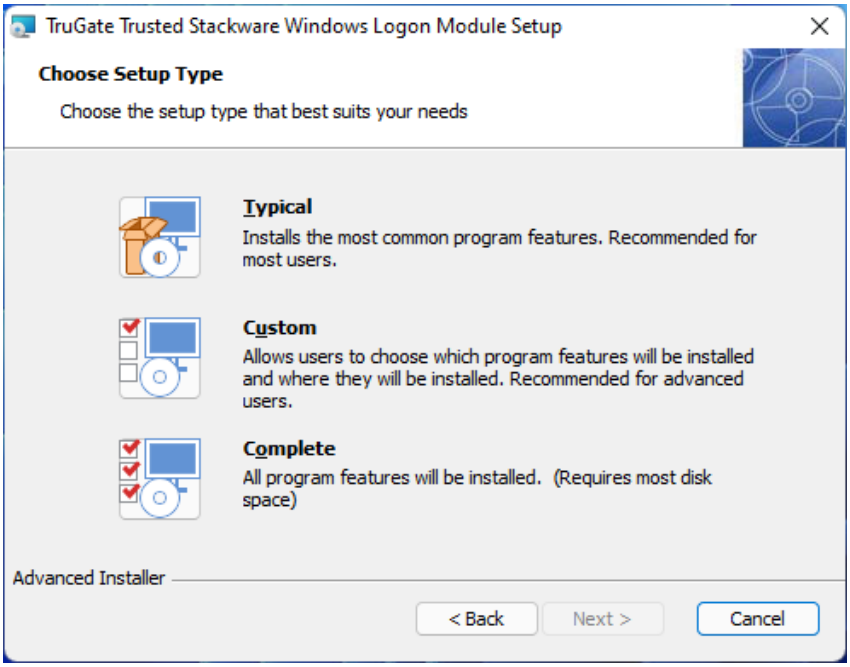

Figure 3 Setup Type Selection Dialog Box

Click the "Install" button unless you need to change. If you need to make some changes, click the "Back" button and return to the dialog box where you want to make changes.

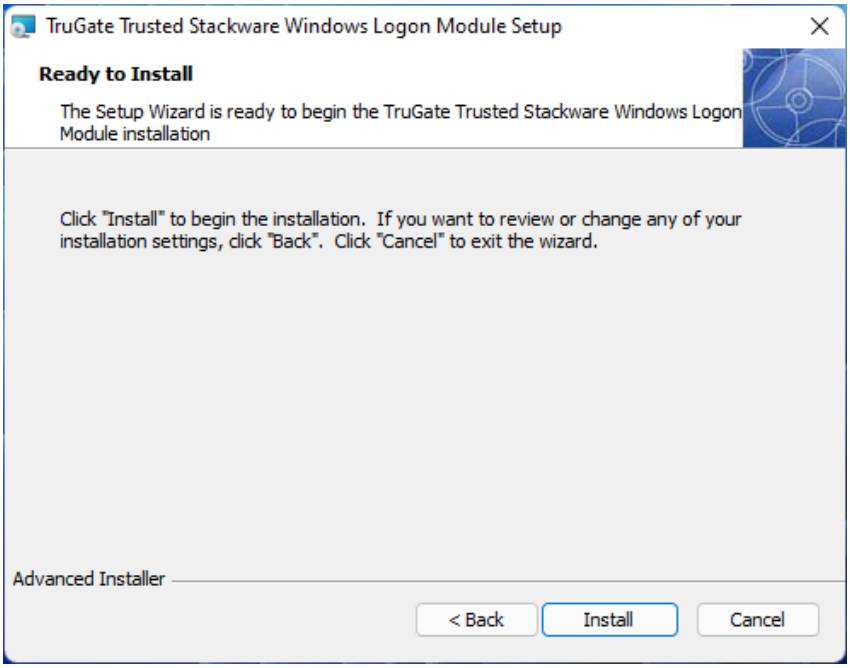

Figure 4 Ready to Install Dialog Box

During installation, the following indicator dialog box will be displayed.

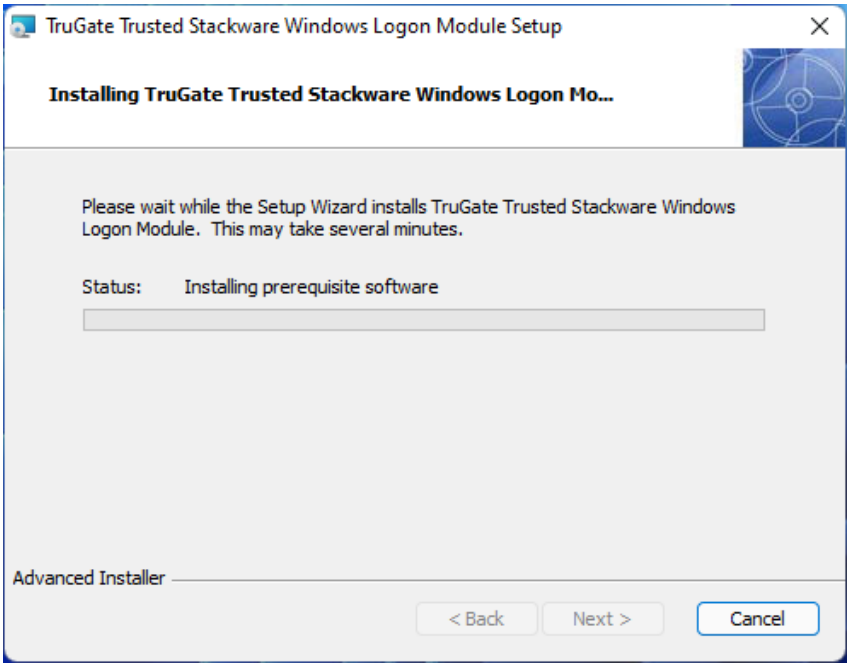

Figure 5 Installation Indicator Dialog Box

When installation is finished, the following installation completion dialog will be displayed. Click the "Finish" button.

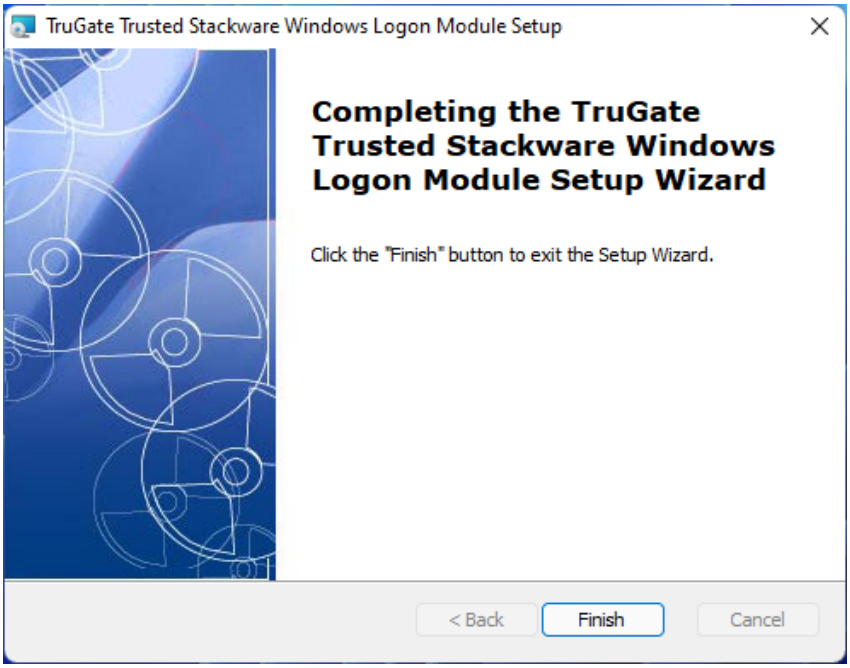

Figure 6 Installation Complete Dialog Box

b. Uninstallation

Select “TruGate Trusted Stackware Windows Logon Module” from "Apps and Features"

of the OS.

The following is an operation example with Windows 11.

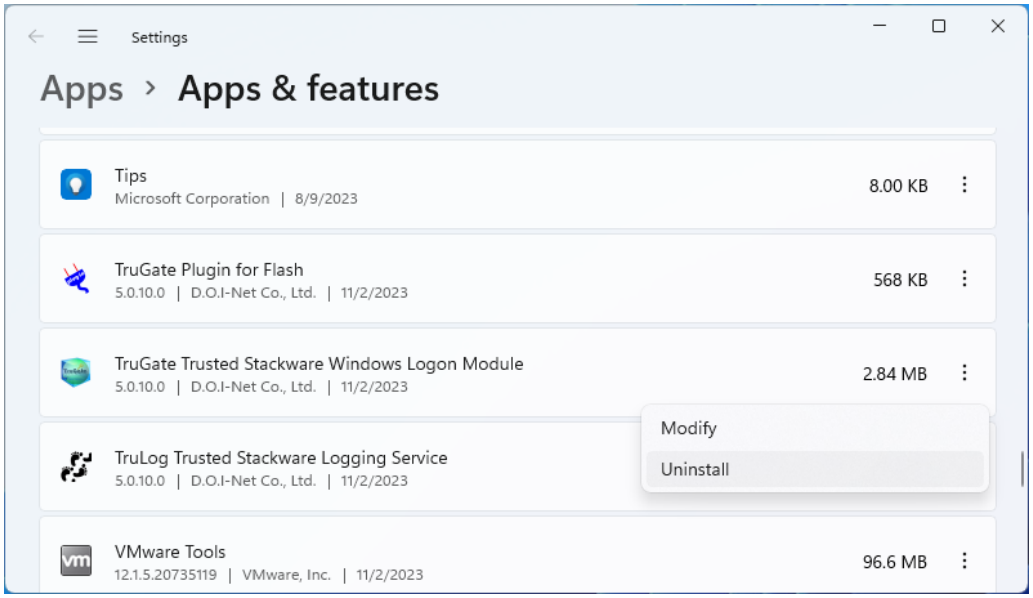

Figure 7 Apps and Features Dialog Box

Then click “Uninstall”, and uninstall TruGate following the message.

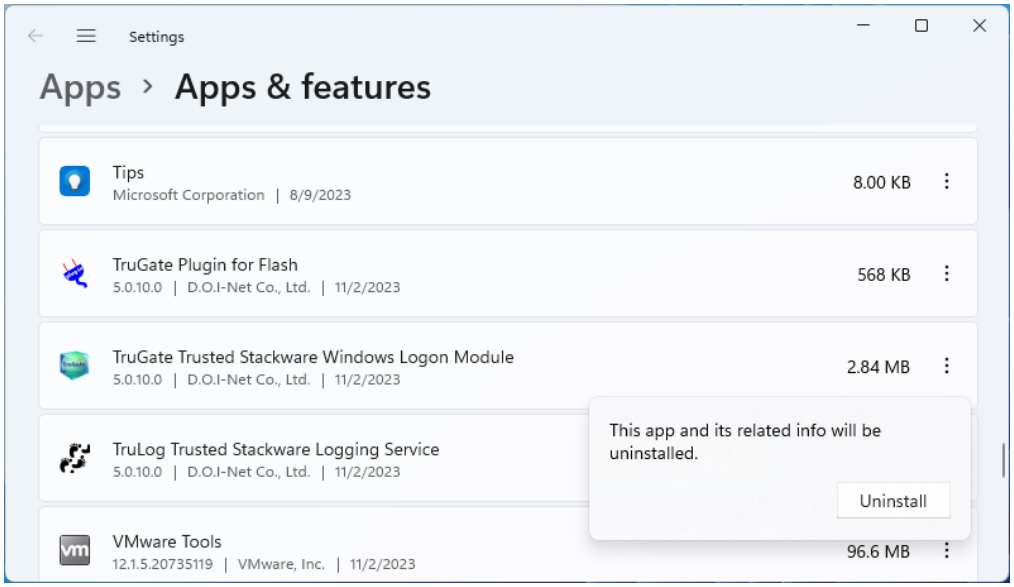

Figure 8 Confirmation of Program Uninstallation Dialog Box

During uninstallation, the following indicator dialog box will be displayed.

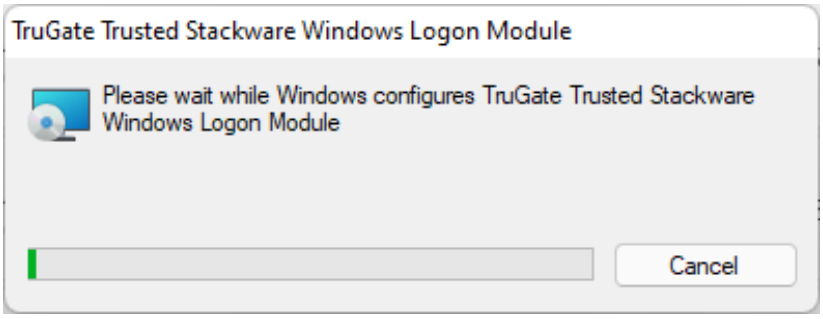

Figure 9 Uninstall Indicator Dialog Box

When uninstallation is completed, the indicator dialog box will disappear.

6. Operation Method

a. Initialization

To use TruGate, start by initializing the configuration according to the following steps.

Note: TruGate will not work without initialization.

i. Launch Configuration Utility

Note: Please log on with the administrator privilege of the local computer to operate the configuration utility.

1) License Verification

Click in the order of “Start” – “All Apps” – “TruStack” – “TruGate Configuration”.

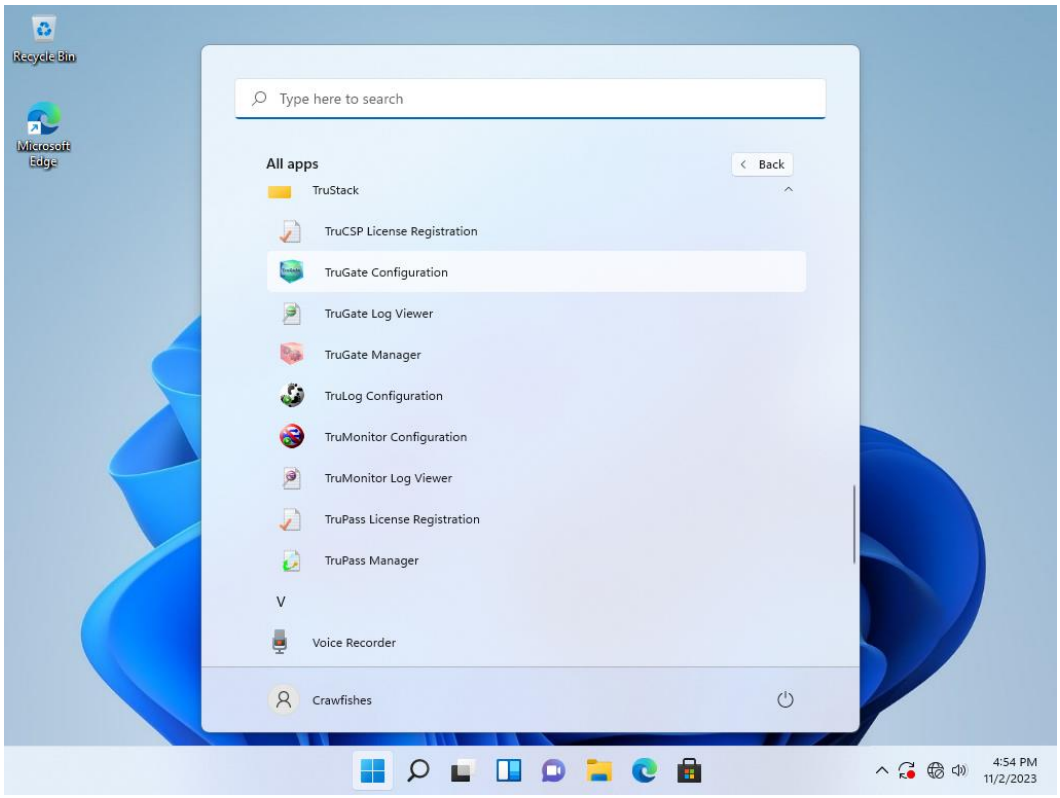

Figure 10 Launch Configuration Utility

The following popup message will be displayed during the trial period. If the message is shown, click the “OK” button.

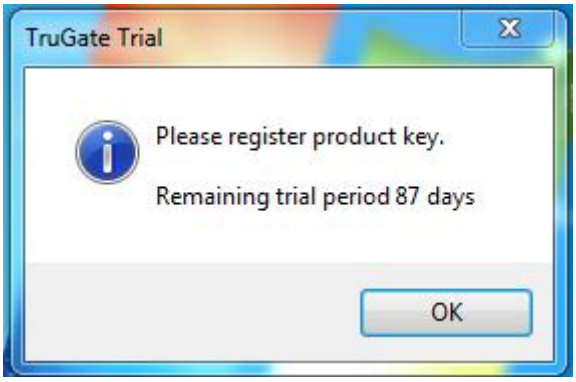

Figure 11 Trial Period Message

Note: Trial period is 1 moth for the single license edition, and 3 months for the volume license edition. You cannot use TruGate after the trial period expires. Please register the product key to use TruGate continuously.

When the trial period is over, the dialog box as follows will be displayed. To keep using it, enter the product key in the edit box, then click the “OK” button. To terminate the trial, click the “Cancel” button, and uninstall TruGate.

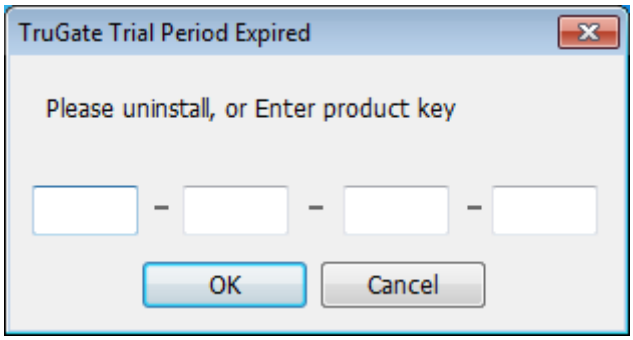

Figure 12 Trial Period Expired Warning Message

Click the “Device Detect Config...” button in the TruGate Configuration utility dialog box, and configure the device.

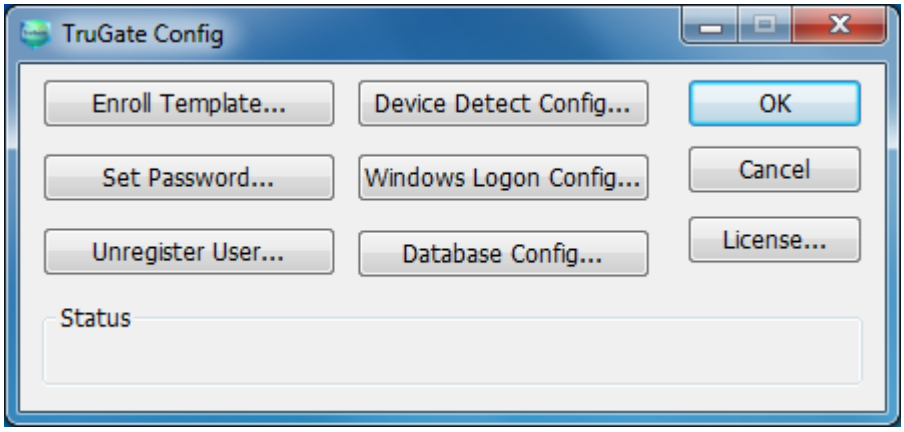

Figure 13 TruGate Configuration Utility Dialog Box - Device Detect Config.

ii. Device Detect Configuration

By clicking the “Device Detect Config...” button, Device Detect Configuration dialog box as follows will be displayed.

If the “Auto” radio button is checked for “Detect Device”, the device listed on the top of “Device Detect Order” list view will be automatically used at the device authentication. If that device is not available, the next enumerated device on the list view will be automatically used.

First, select the authentication device you want to use from “Device Detect Order” list view, and configure the device by clicking the “Select Device Config…” button. Next, use ⬆ or ⬇ button to switch the detection order of the authentication devices to suit your preferences. Then, click the “OK” button.

If the “Manual” radio button is checked for “Detect Device”, “Device Detect Order” list view will be changed to “Select Device” list view. Select the authentication device you want to use from “Select Device” list view, and click the “Select Device Config…” button to configure the device, then, click the “OK” button.

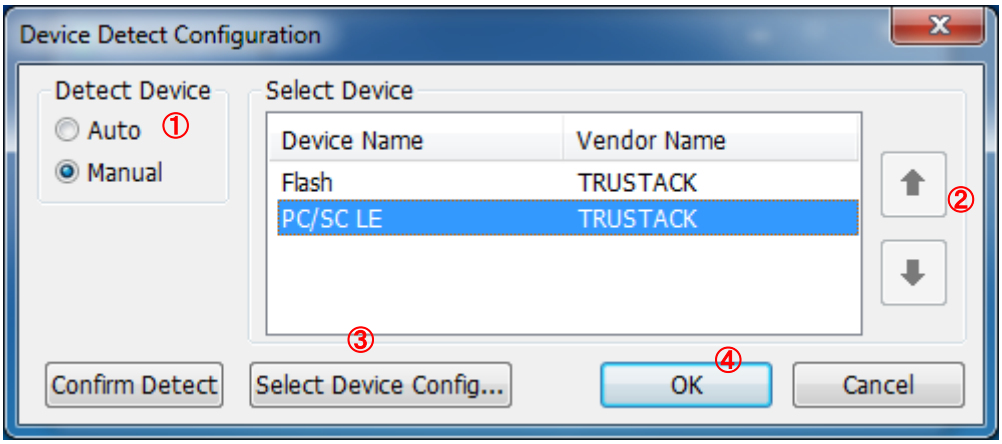

Figure 14 Device Detect Configuration Dialog Box

For the device configuration of each device plug-in, refer to the relevant user's guide.

Note: If you install a device plug-in additionally after the completion of the device detect configuration, please do the device detect configuration again.

iii. Database Configuration

If you want to use the database other than the default database of TruGate, execute Database Configuration. You can use the database which comes with the ODBC driver. If you do not wish to use the other database, it is not necessary to execute Database Configuration.

Note: You need to configure the data source (ODBC) prior to executing Database Configuration. Please refer to a Data Source (ODBC) configuration section described below in more detail.

By clicking the "Database Config..." button, Database Configuration dialog box as follows will be displayed.

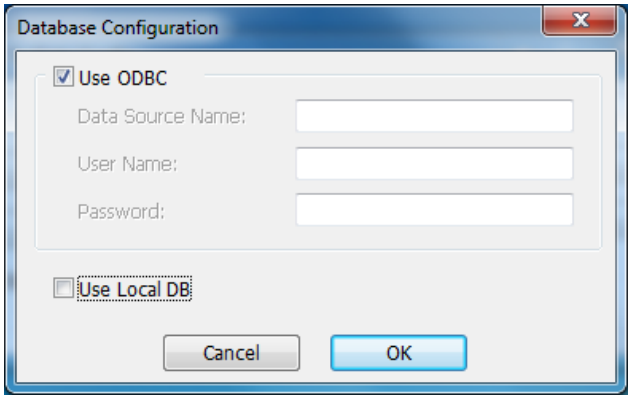

Figure 15 Database Configuration Dialog Box - launch

Check the “Use ODBC” check box and enter the data source name in the “Data Source Name” edit box. If the user name and the password connect the database server are specified, enter them in the “User Name” edit box and the “Password” edit box respectively.

If you allow the end users to be authenticated by using the cached data at off line, check the “Use Local DB” check box. The contents of ODBC database will be cached by the TruGate default database. Click the “OK” button after completed.

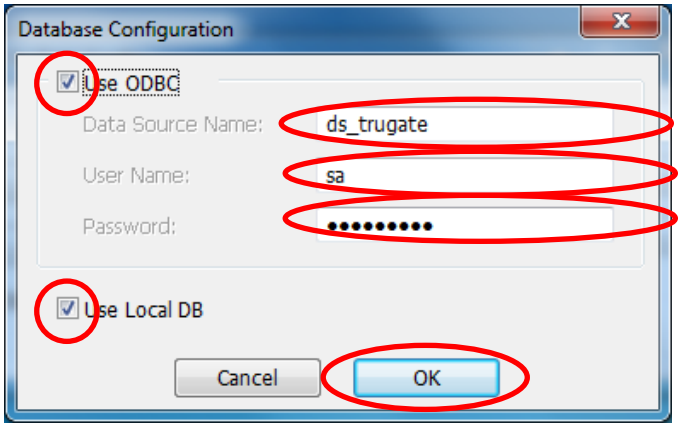

Figure 16 Database Configuration Dialog Box - entry

iv. Template Enrollment

After the device detect configuration is completed, enroll the template of the authentication device.

Template Enrollment Utility dialog box as follows will be displayed by clicking the “Enroll Template” button in TruGate Configuration utility dialog box.

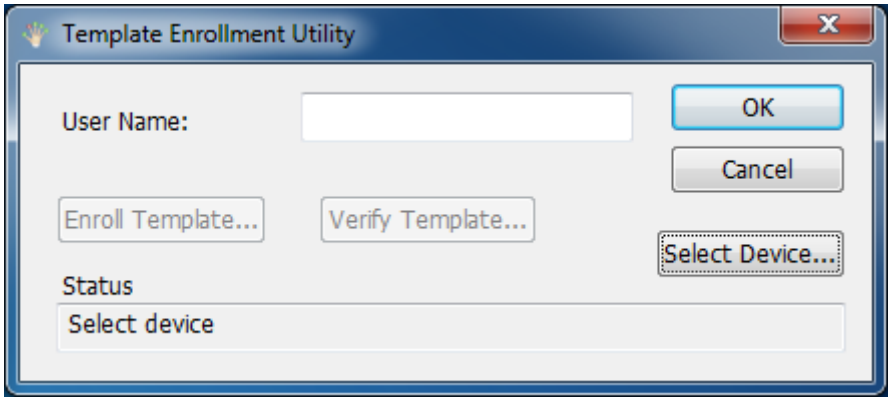

Figure 17 Template Enrollment Utility Dialog Box

Refer to the user’s guide of each device plug-in for the template enrollment.

Note: You cannot register the password without enrolling the template. Please enroll the template by all means.

v. Password Registration

After enrolling the template, register the password for Windows Logon.

Set Password dialog box as follows will be displayed if the “Set Password…” button is clicked in TruGate Configuration utility dialog box.

In the case of PC belonging domain, select the domain or local (this computer) from Domain Name drop down list.

Note: If the same user name account exists on both domain and local PC in the case of joining domain, please register a password for the domain and local PC respectively.

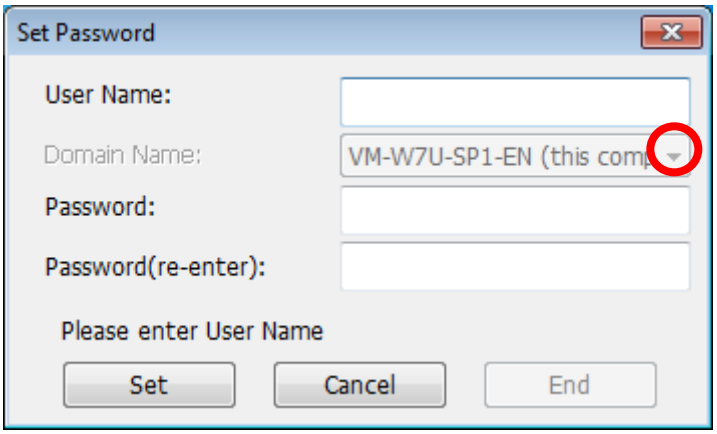

Figure 18 Set Password Dialog Box

First, place the authentication device that you used for the template enrollment.

Next, enter the existing Windows user name and Windows logon password in “User Name” edit box and “Password” edit box respectively. Enter the Windows logon password in “Password (re-enter)” edit box as well, then, click the “Set” button.

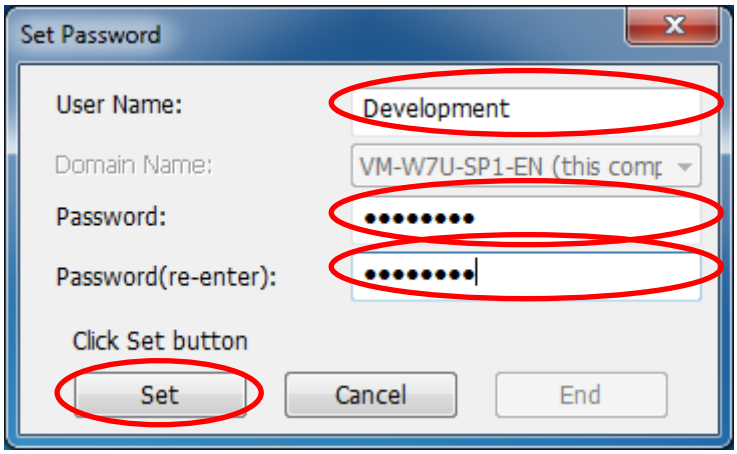

Figure 19 Set Password Dialog Box - entry

1) **Registration Example**

The following dialog box shows an example in the case of applying the generic USB flash memory device plug-in.

If the “Set” button is clicked, PIN Authentication dialog box as follows will appear. Enter the same code character string that you registered at the template enrollment, then, click the “OK” button.

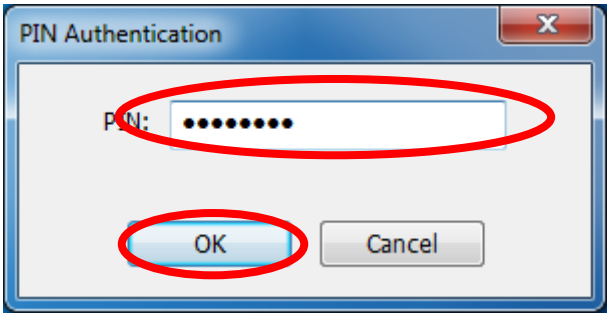

Figure 20 PIN Authentication

If the password registration is successfully done, a message such as “Password is set” will be displayed on the status line.

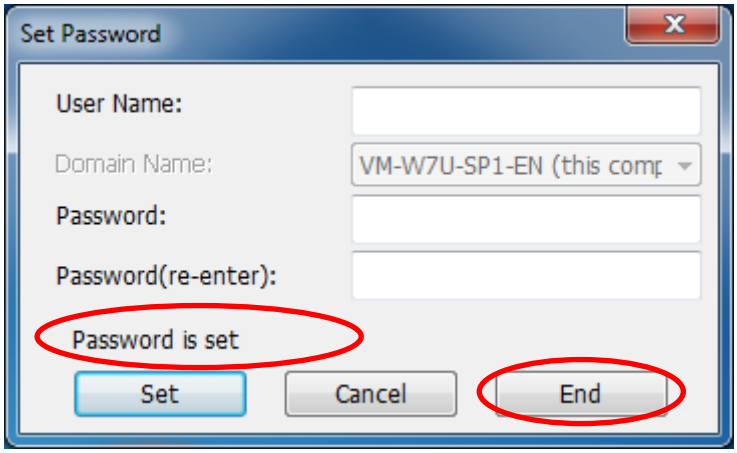

Figure 21 Set Password - end

If you want to register other user’s password subsequently, replace the authentication device with other user’s one, and repeat the registration.

Then, click the “End” button to complete the password registration.

vi. **Enable TruStack Gina**

If TruStack Gina is enabled, Windows Logon and Workstation Unlock can be done with the device authentication, instead of password authentication. Unless you want to replace the authentication method, the following procedure is not necessary.

To enable TruStack Gina, click the “Windows Logon Config…” button in TruGate

Configuration utility dialog box, then, launch Windows Logon Module Configuration dialog box.

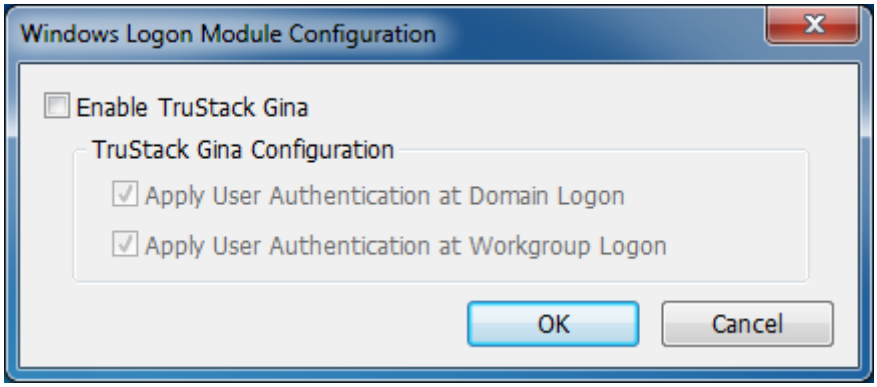

Figure 22 Windows Logon Module Configuration Dialog Box

After Windows Logon Module Configuration dialog box appears, check the "Enable TruStack Gina" check box, and click the "OK" button.

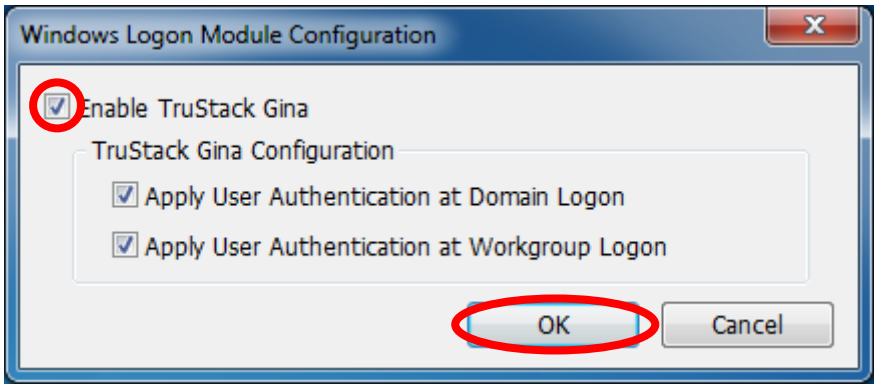

Figure 23 Windows Logon Module Configuration Dialog Box - enabled

For those who know this product well, the followings would indicate the detailed configuration of each item on Windows Logon Module Configuration. Generally, however, use this product without modification.

1) **Apply User Authentication at Domain Logon**

   This feature will be valid if the "Enable TruStack Gina" check box is checked. Here, the device authentication will be applied when logging on to the domain or unlocking the workstation.

2) **Apply User Authentication at Workgroup Logon**

   This feature will be valid if the "Enable TruStack Gina" check box is checked. Here, the device authentication will be applied when logging on to the workgroup and unlocking the workstation.

   Note: If template enrollment is not completed, the "Enable TruStack Gina" check box will be automatically unchecked and saved.

vii. Unregister User

All of the information such as template, password and certification that are related to the user will be deleted if the user is unregistered.

If you want to unregister a user, click the “Unregister User” button.

When the “Unregister User” button in TruGate Configuration utility dialog box is clicked, the following Unregister User dialog box will be displayed.

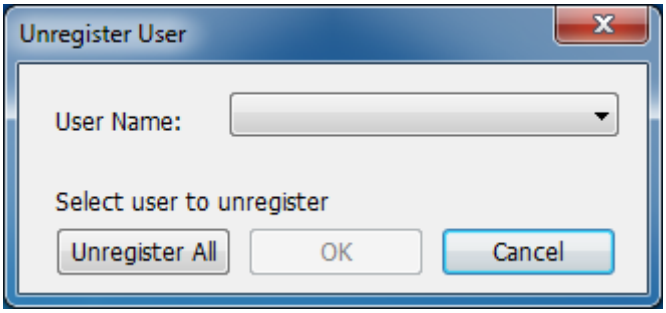

Figure 24 Unregister User Dialog Box

When Unregister User dialog box is displayed, select the user you want to unregister from the “User Name” drop down list.

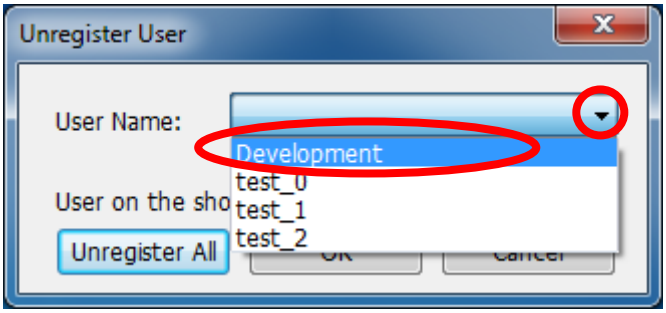

Figure 25 Unregister User Dialog Box - select user

Click the “Unregister” button after selecting the user you want to unregister.

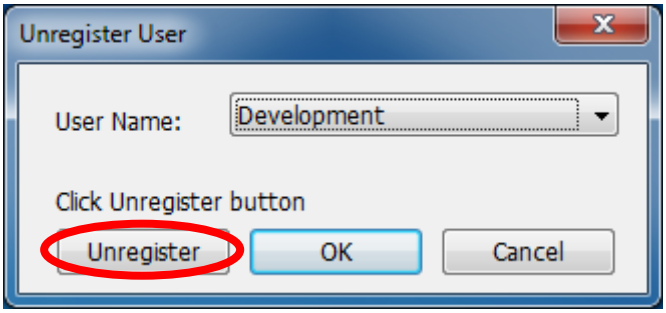

Figure 26 Unregister User Dialog Box - unregister

When the user is successfully unregistered from the shown list, a message like

below will be displayed. Unregistering of the user will be completed when the “OK” button is clicked. If the “Cancel” button is clicked, the unregistering operation will be cancelled.

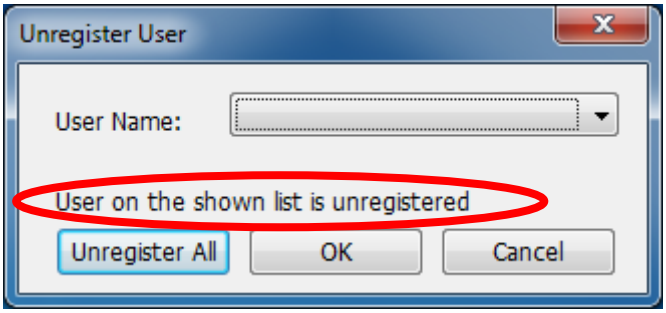

Figure 27 Unregister User Dialog Box - unregistered from list

In order to unregister all of the users, click the “Unregister All” button.

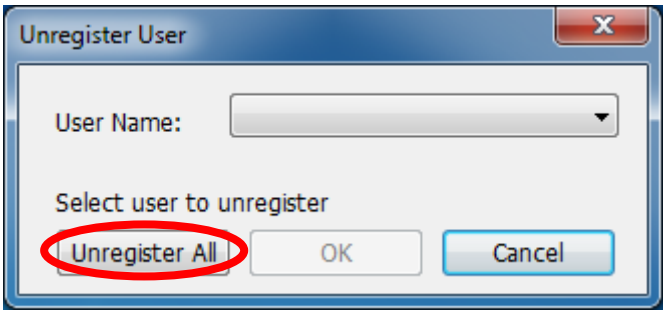

Figure 28 Unregister User Dialog Box - unregister all users

A confirmation message like below will be displayed. Click the “Yes” button when you really want to do so.

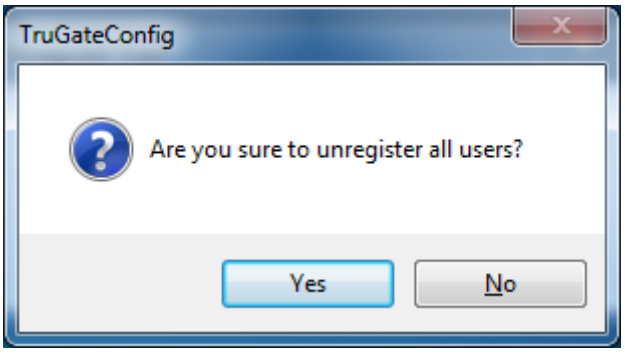

Figure 29 Message to confirm of unregistering all users

The following message will be displayed if all the users are unregistered from the shown list successfully. After clicking the “OK” button, unregistering of all the users will be completed. If you click the “Cancel” button, the unregistering operation will be

cancelled.

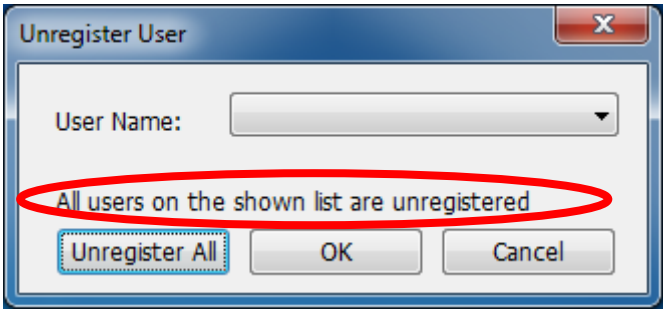

Figure 30 Unregister User - unregister all of users from list

viii. License Registration

To register the product license, click the “License…” button in TruGate Configuration utility dialog box.

When License Registration dialog box appears, click the “OK” button after entering the product key you obtained separately in the edit box. If the “Cancel” button is clicked, the license registration operation will be cancelled.

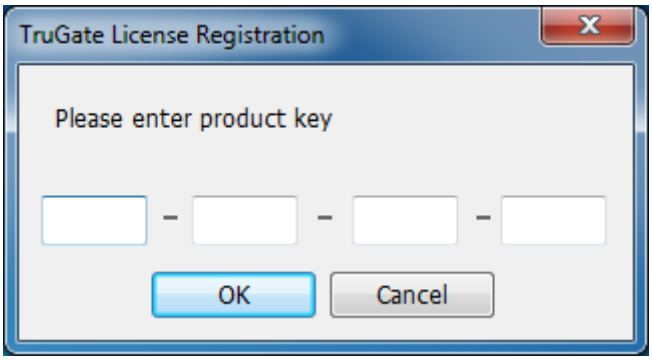

Figure 31 License Registration

If the verification of product key is successfully done, and the registration is normally completed, the “License…” button on TruGate Configuration utility will disappear.

ix. End Configuration Utility

After completing initialization, click the “OK” button to end TruGate Configuration utility.

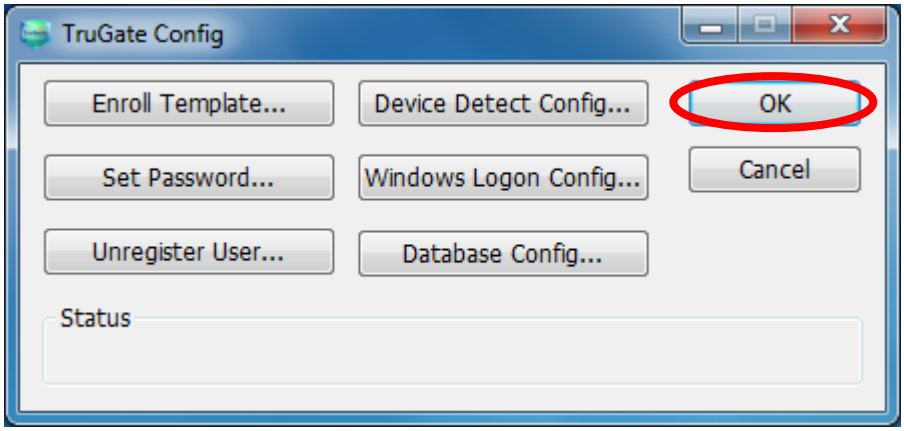

Figure 32 TruGate Configuration Utility Dialog Box - end

b. Windows Logon via TruStack Gina

i. Logon

The following dialog box shows an example in the case of applying the generic USB flash memory device plug-in.

After enabling TruStack Gina by Windows Logon Module Configuration on TruGate Configuration utility, and if a Logon screen as follows is displayed after rebooting the PC, select the target environment from “Logon To” drop down list, then enter the user name in the “User Name” edit box.

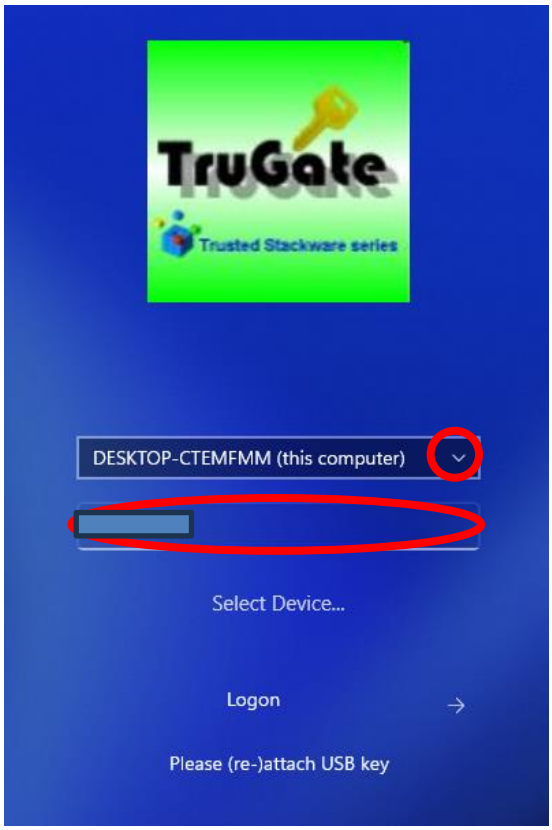

Figure 33 Windows Logon Screen - enter user name

After entering the user name, attach or re-attach USB flash memory to the PC, and if PIN Authentication dialog box is displayed, authenticate the device by entering PIN. In the case of using other authentication device, click "→" button, and authenticate it according to the device authentication dialog displayed subsequently, such as a fingerprint authentication dialog. The logon process will start after the authentication is completed successfully.

Figure 34 Windows Logon Screen – start authentication

Note: If "this computer" is selected for Logon To when trying to logon to Windows by a Well Known User name, such as Administrator, the device authentication dialog box will not be displayed, instead, the following Enter Windows Logon Password dialog box will be displayed. If this dialog box pops up, please click the "OK" button after entering the password.

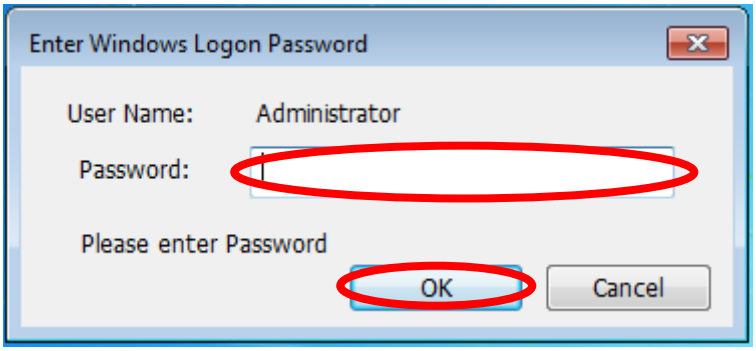

Figure 35 Enter Windows Logon Password Dialog Box

ii. Select Device and Device Configuration

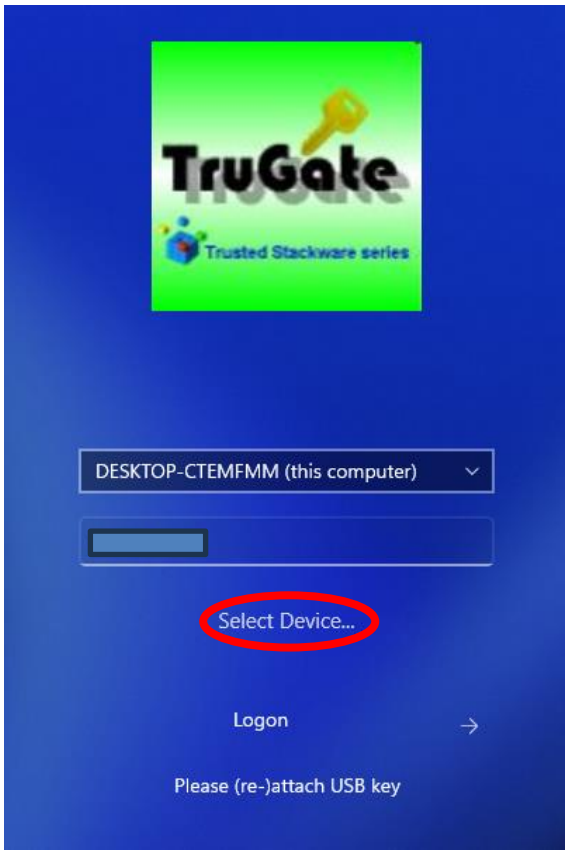

Figure 36 Windows Logon Screen – select device

If “Select Device” is clicked in the above screen, Select Authentication Device dialog box as follows will be displayed.

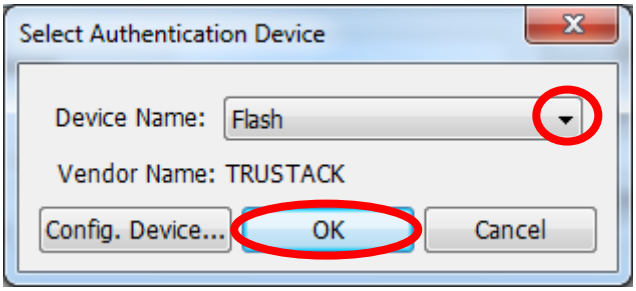

Figure 37 Select Authentication Device Dialog Box

If you need to use other authentication device than the default authentication device, select your preferred authentication device from “Device Name” drop down list, then click the “OK” button. To configure the selected device, click the “Config. Device...” button before clicking the “OK” button.

Note: Please refer to the device plug-in user’s guide for the details of device configuration.

Then, click the “OK” button or “→” button in the previous screen.

iii. About Password Change

Note: If you want to change the password, please logon with the administrative privilege of the local computer. It is necessary to change the OS password and the TruGate password respectively.

1) Change OS Password

First, logon to Windows and type Ctrl + Alt + Del key.

Next, when management screen as follows is displayed, click the “Change a Password”.

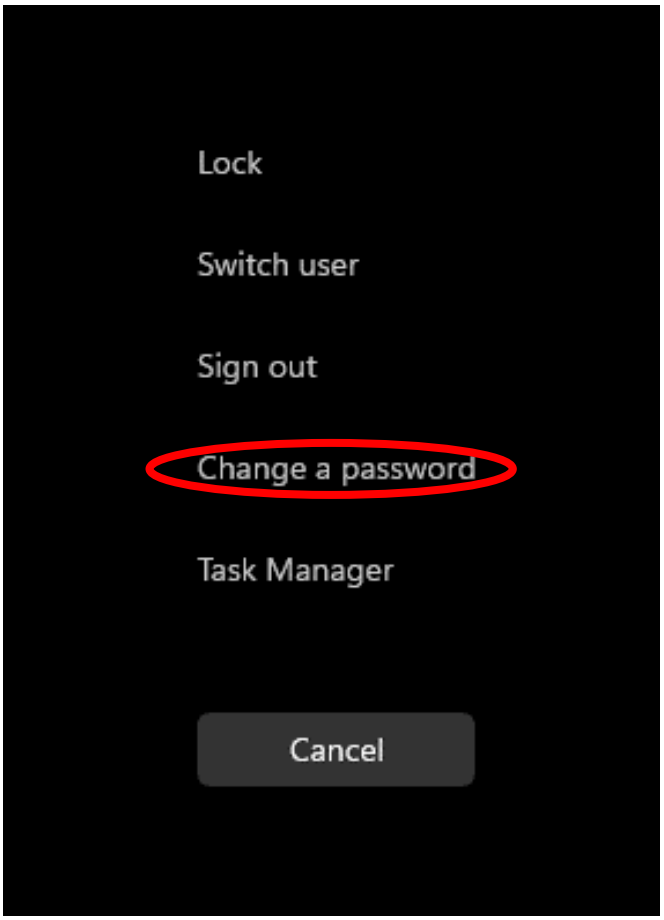

Figure 38 Management Screen

Next, when Change a Password Screen is displayed, enter the old password and new password then click the “→” button.

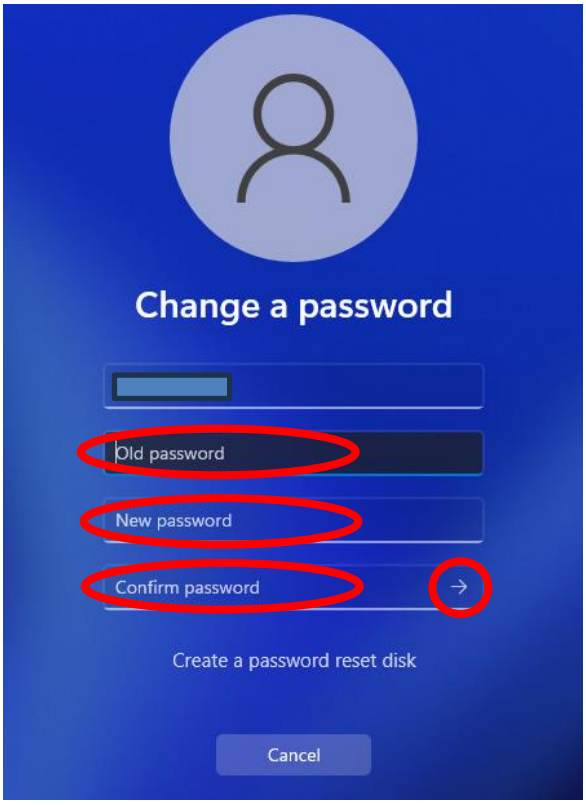

Figure 39 Change Password Screen

2) Re-registration TruGate Password

Once OS password is changed, reregister the new password to TruGate according to the “Password Registration” procedure described above before logging on to Windows with the user name for which the password has been changed.

c. Unlock Workstation by TruStack Gina

i. Unlock

The following dialog box shows an example in the case of applying the generic USB flash memory device plug-in.

Once TruStack Gina is enabled by Windows Logon Module Configuration of TruGate Configuration utility, and Computer Locked screen as follows is displayed when Windows Lock is performed, attach or re-attach USB flash memory to the PC according to the message, enter PIN if PIN Authentication dialog box pops up, then execute the device authentication. In the case of using other authentication device, click “→” button to start authentication. A device authentication dialog box depending on each authentication device will be displayed subsequently. Execute the device authentication.

Workstation Lock will be unlocked after the device authentication is successfully completed.

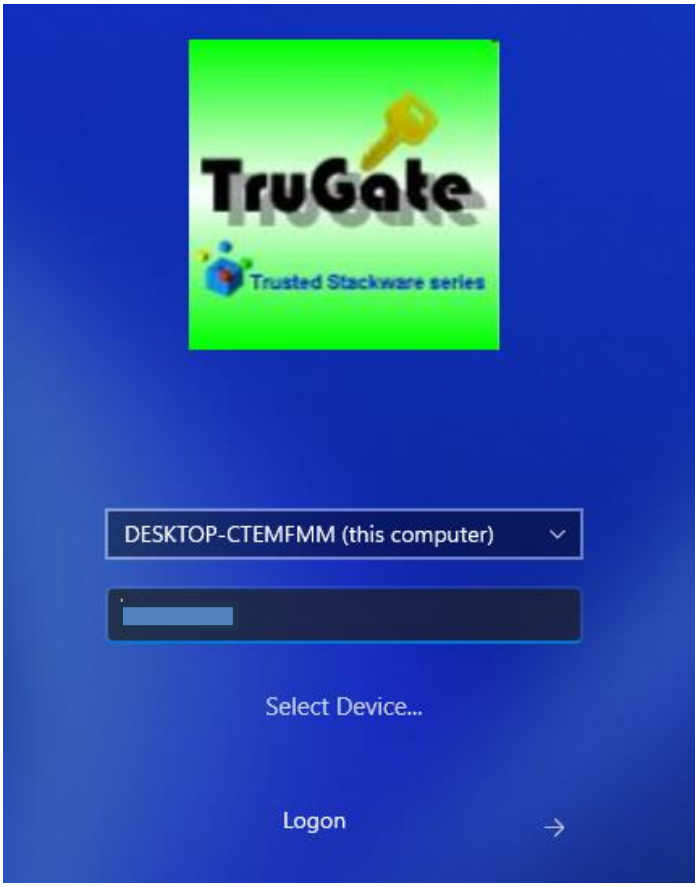

Figure 40 Unlock Computer Screen

Note: If "this computer" is selected for Logon To when trying to logon to Windows by a Well Known User name, such as Administrator, Windows Password entry will be required at Unlock Computer screen. Device authentication dialog box will not be displayed depending on the device, either.

d. Workstation Lock by Detachment of Authentication Device

If you want to perform Workstation Lock or Logoff at detaching the authentication device such as a USB flash memory or a smartcard, you can do so by changing the Windows configuration according to the following procedure.

i. Configure Local Security Policy

Type "Local Security Policy" into the search box, and launch the found it.

After Local Security Policy is launched, select "Security Option" from the left pane, then double click on the "Interactive logon: Smartcard removable behavior" from the

right pane.

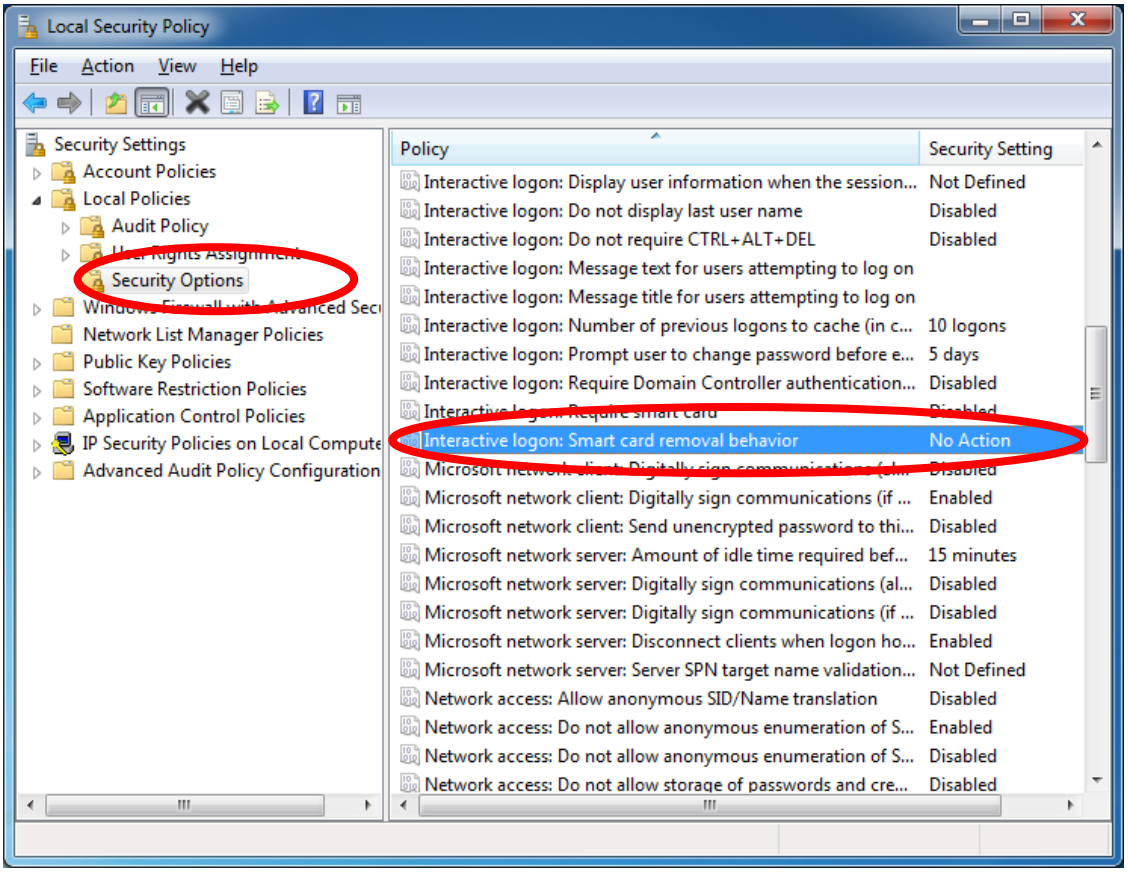

Figure 41 Local Security Policy

After “Interactive logon: Smartcard removable behavior properties” is displayed, select the operation you want to do from the drop down list, then, click the “OK” button.

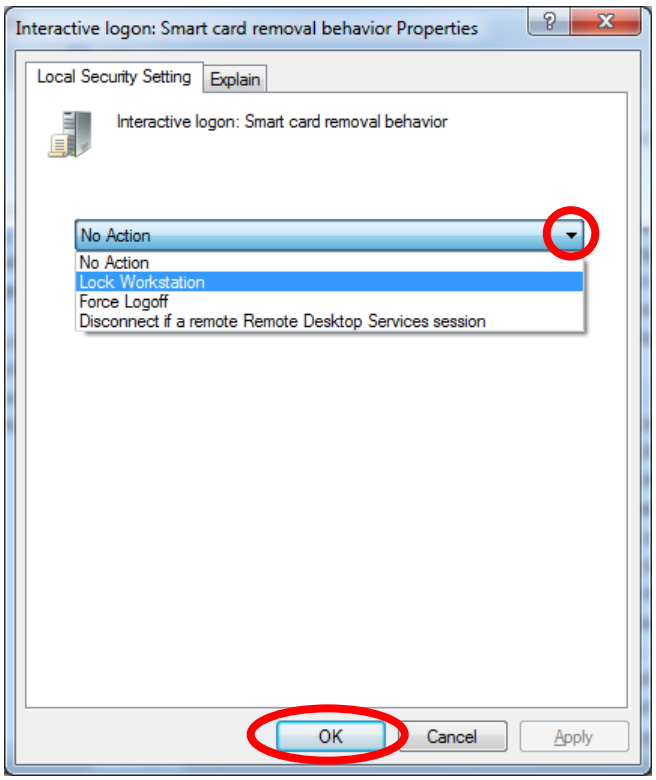

Figure 42 Smartcard Removable Behavior Properties

After returning to Local Security Policy, end it by clicking in the order of “File” – “Exit” in the menu bar.

After the next Windows Logon, Workstation Lock or Logoff will be available by removing the authentication device.

e. Database

In the case of the database service is running on the network or on the PC with TruGate installed, and the ODBC driver is provided for that database service, you can utilize that database instead of the TruGate default database for the authentication database.

Note: You need to create the database and table prior to configure the data source (ODBC). The following shows the example of SQL Server 2008. If you use the other database, please create the database and table by referring to the SQL script file.

i. Create Database

First, launch SQL Server Management Studio on the PC installed SQL Server, then click the “Connect” button to connect the targeted SQL Server.

Figure 43 Launch SQL Server Management Studio

When SQL Server Management Studio dialog box is displayed, click in the order of "File" – "Open" – "File".

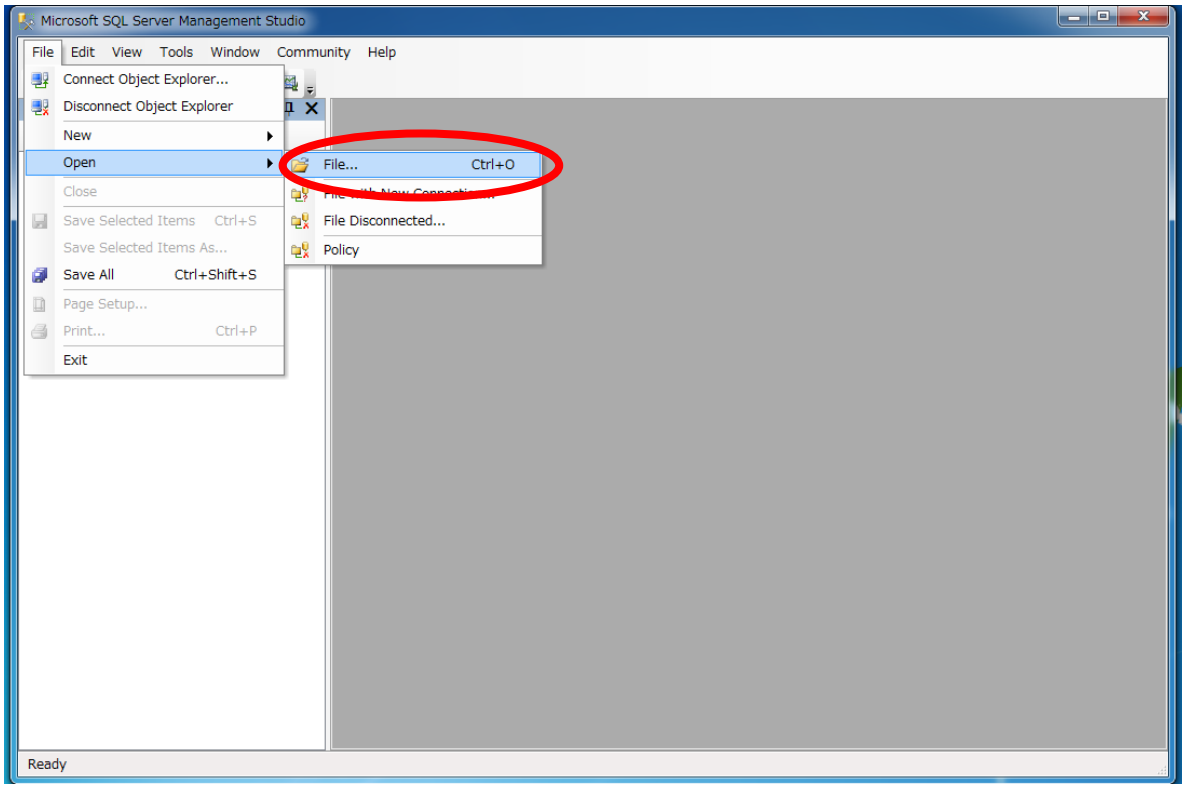

Figure 44 Open SQL Script File

Next, if "Open File" dialog box is displayed, select the previously got the SQL script

file, and then click the “Open” button.

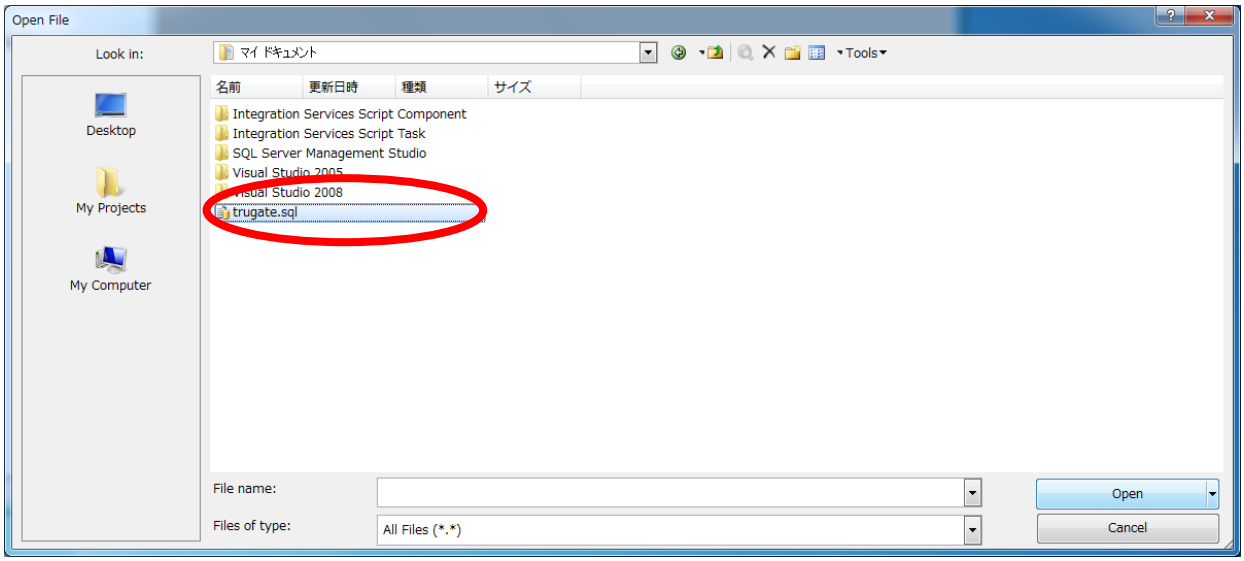

Figure 45 Select SQL Script File

After the SQL script file is loaded, modify the database file path in the pane according to your environment, then click the “Execute” button.

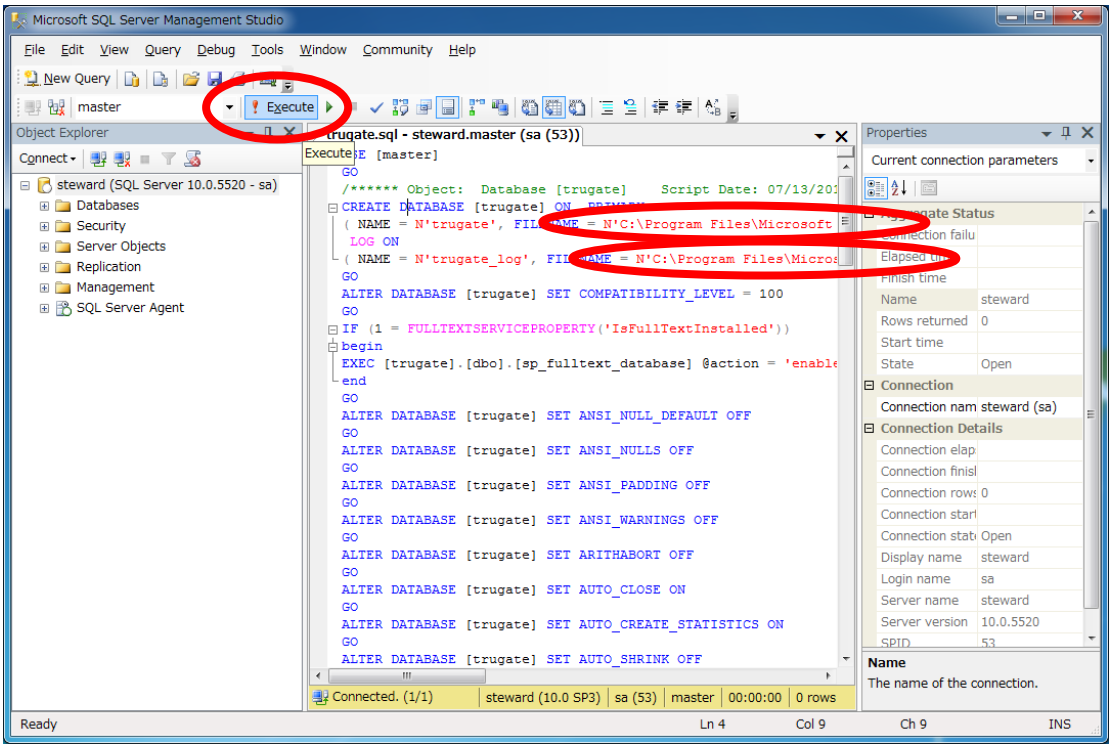

Figure 46 Execute SQL Script

If you succeeded to run the SQL script file, the trugate database as shown below is created.

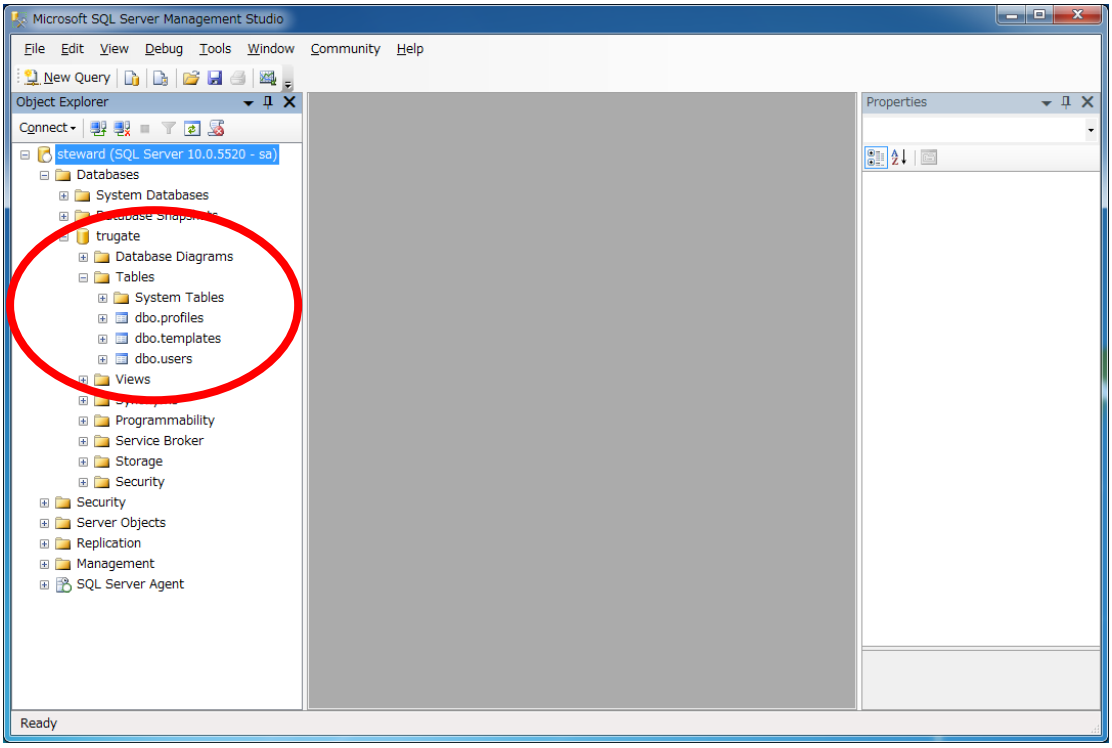

Figure 47 Create trugate Database

ii. Configure Data Sources (ODBC)

Type “ODBC Data Sources (64-bit)” into the search box, and launch the found it. When ODBC Data Source Administrator is launched, select “System DSN” and click the “Add” button.

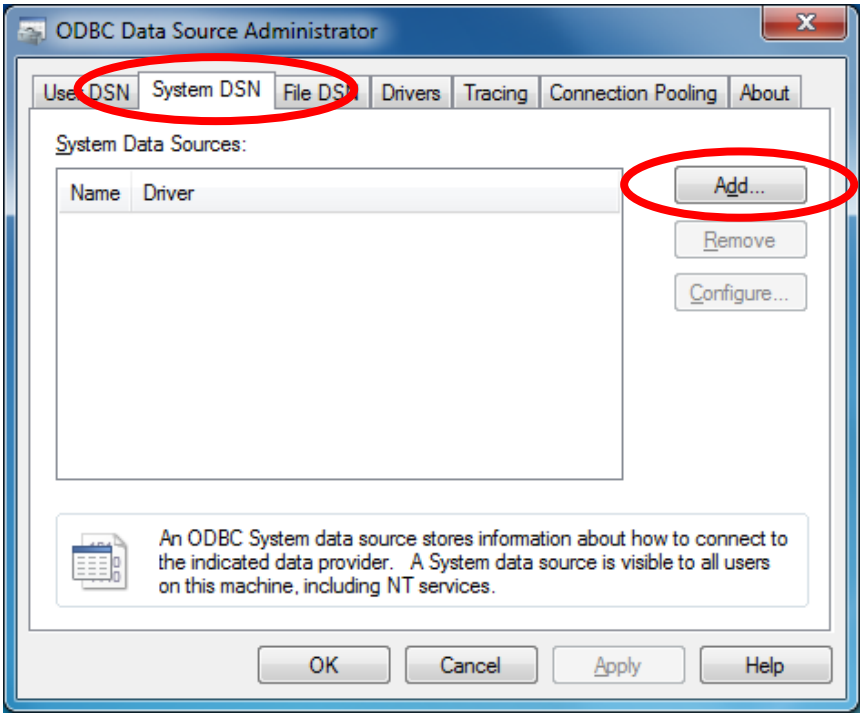

Figure 48 Launch ODBC Data Source Administrator

Create New Data Source dialog box will be displayed. Select the ODBC driver of your database, and click the “Finish” button.

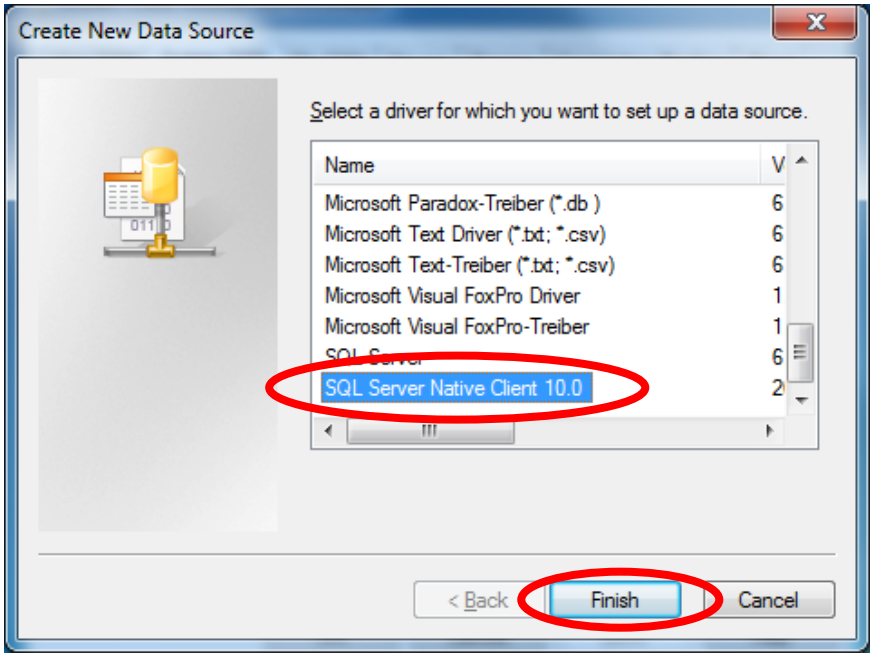

Figure 49 Create New Data Source

When Create a New Data Source to SQL Server wizard is displayed, enter the new data source name and the SQL server name in the “Name” edit box and the “Server”

edit box respectively. Then, click the “Next” button.

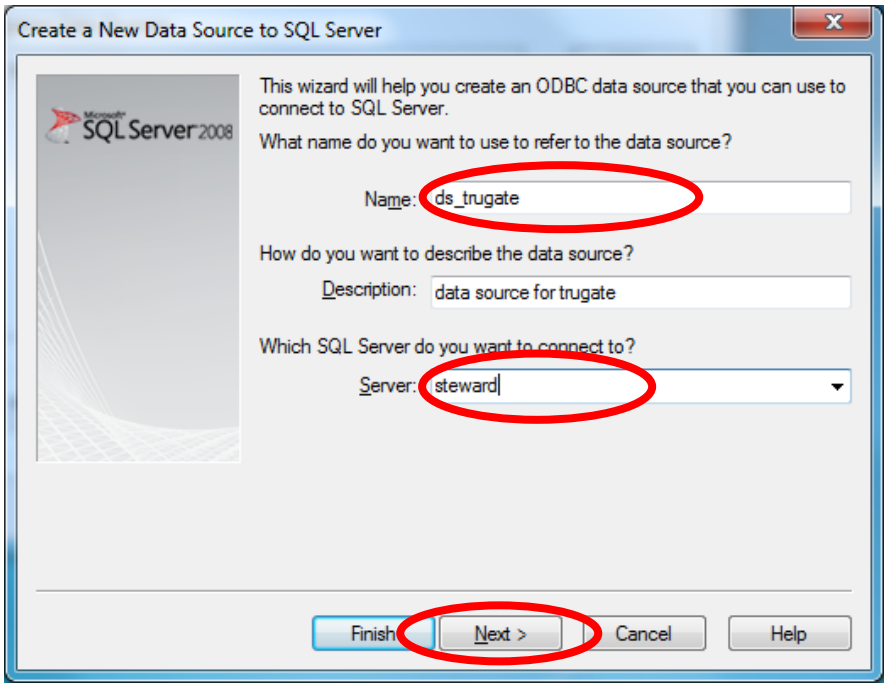

Figure 50 Create a New Data Source to SQL Server Wizard - basic configuration

Next, specify the SQL server authentication method. Click the “Next” button after specified.

Note: If you choose “With Integrated Windows authentication”, you need to grant the logon users the read/write rights to the trugate database.

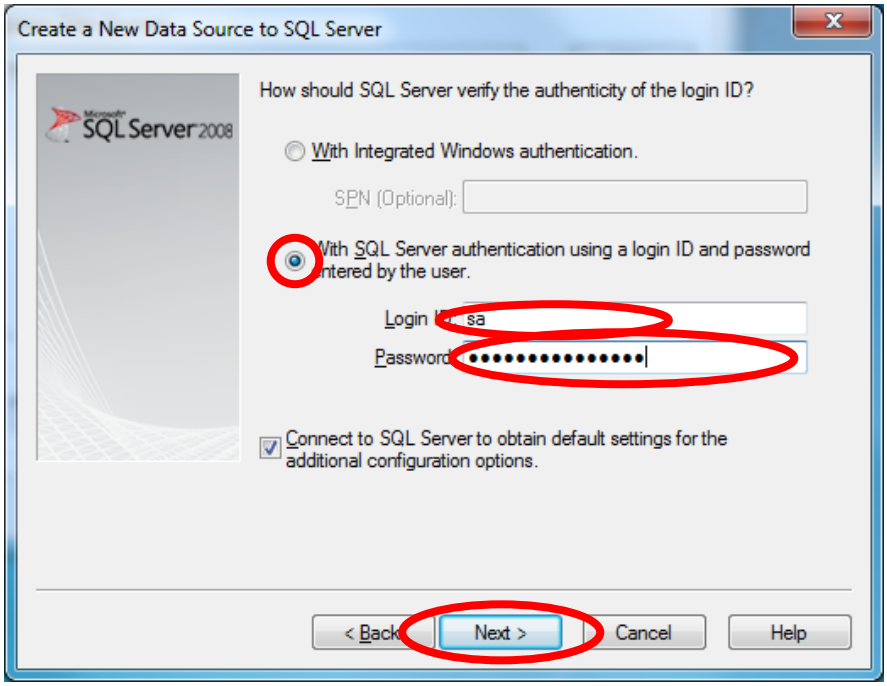

Figure 51 Create a New Data Source to SQL Server Wizard - authentication method

When the database configuration page is displayed, check the “Change the default database to:” check box, and select the trugate database previously created from the drop down list. Then, click the “Next” button.

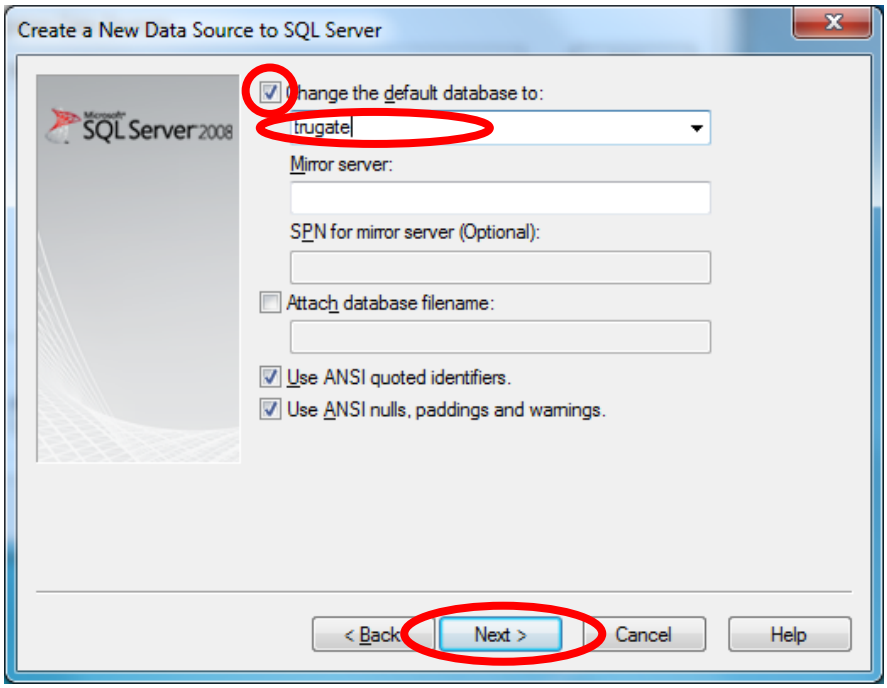

Figure 52 Create a New Data Source to SQL Server Wizard - default database

Next, the detail configuration page will be displayed. Click the “Finish” button.

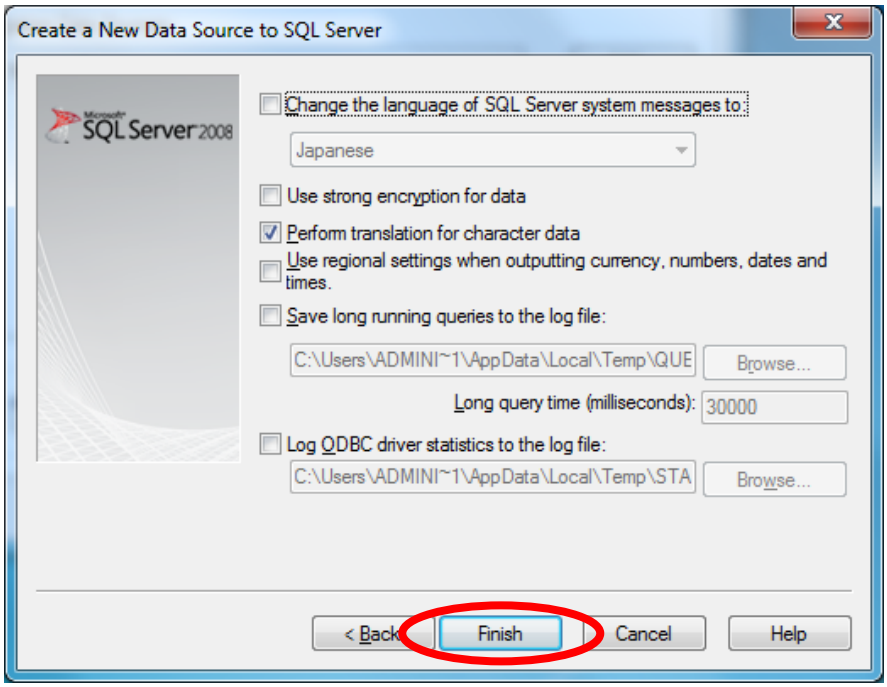

Figure 53 Create a New Data Source to SQL Server Wizard - detail configuration

The ODBC Microsoft SQL Server Setup dialog box will be appeared. Click the “Test Data Source...” button.

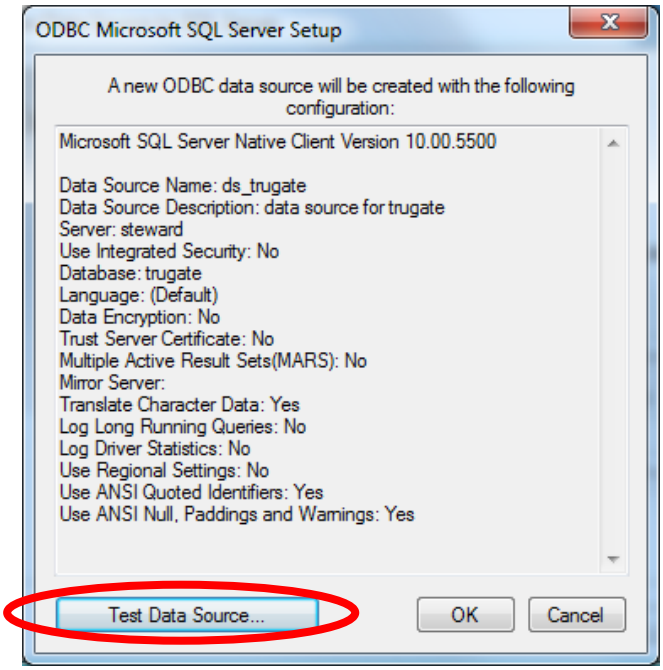

Figure 54 ODBC Microsoft SQL Server Setup Dialog Box

Then, the SQL Server ODBC Data Source Test dialog box is displayed, click the “OK”

button. If you failed the test, redo the data source creation.

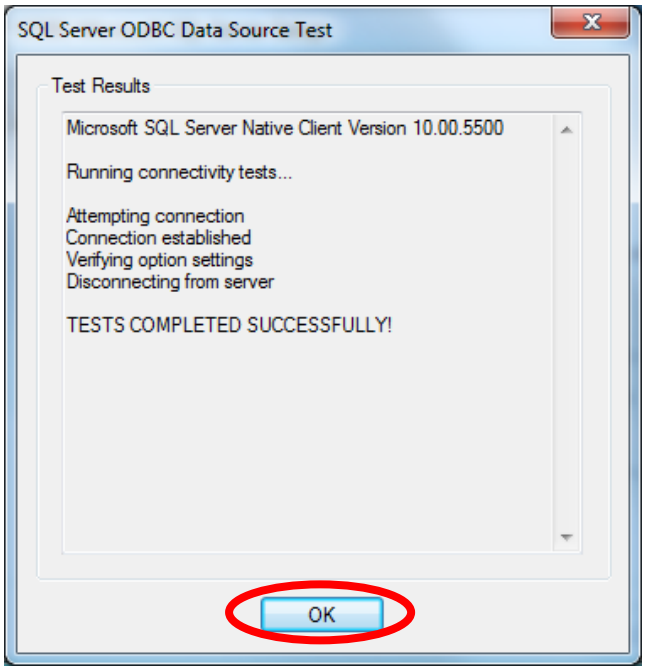

Figure 55 SQL Server ODBC Data Source Test Dialog Box

If you succeeded to create the data source and return to the ODBC Data Source Administrator, the newly added data source will be listed up as shown below

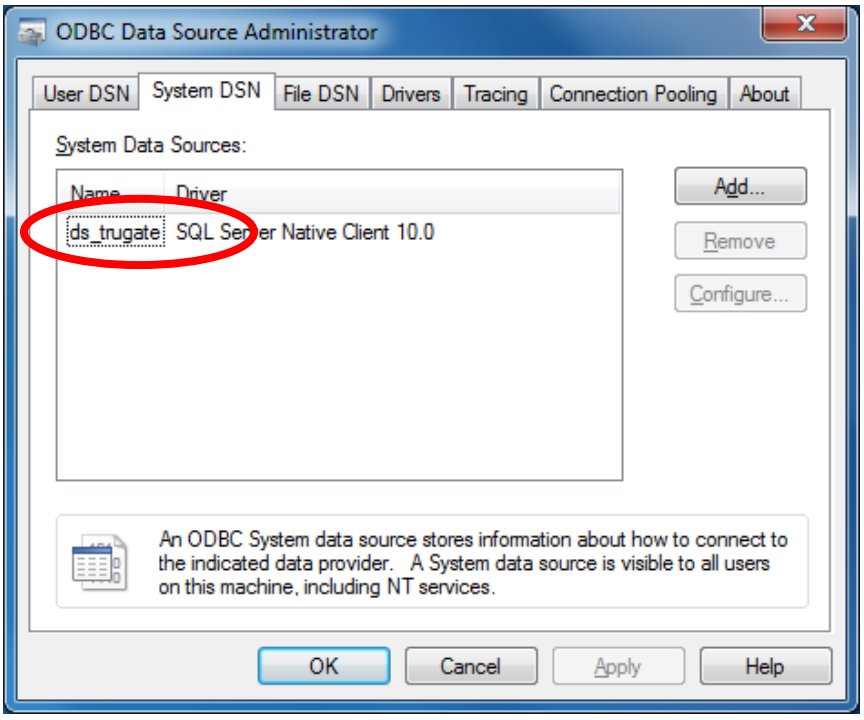

Figure 56 Finish ODBC Data Source Administrator

End of Document

Questions to Trusted Stackware series product
D.O.I-Net Co., Ltd.
Zip Code: 190-0011
2-25-23 Takamatsu, Tachikawa, Tokyo JAPAN
E-Mail: info@doi-net.com
URL: https://www.doi-net.com/