



### AutomaTech Application Note – July 2015

Installing Active Directory Domain Services (AD DS), Remote Desktop Services (RDS), GE Advantage Licensing, and GE Proficy SCADA Thin Clients on Windows Server 2012 R2

#### SUMMARY

This application note provides a high level overview for deploying Thin Client (Remote Desktop Services) Proficy HMI/SCADA Clients under Microsoft's Windows Server 2012 R2 Operating System. The following topics are covered in this application note:

- 1. Installing and Configuring Active Directory Domain Services (AD DS) on a Domain Controller Server computer running Windows Server 2012 R2
- 2. Installing, Configuring, and Licensing Remote Desktop Services (RDS) on a Remote Desktop Server computer running Windows Server 2012 R2
- 3. Installing, Configuring, and Activating GE Advantage Licensing on a Local License Server for use with GE Proficy SCADA Thin Clients
- 4. Overview of Installing and Configuring GE Proficy HMI/SCADA iFIX for use in a Remote Desktop Services Environment
- 5. Overview of Installing and Configuring GE Proficy HMI/SCADA CIMPLICITY for use in a Remote Desktop Services Environment





This application note assumes you have a solid understanding of Microsoft Windows Operating Systems, Networking, Virtualization, GE Proficy HMI/SCADA products, and that your HMI/SCADA infrastructure has already been established. A simplified architecture of the computers used in this application note are depicted below.



The following conditions have been taken into account in the writing of this application note:

- GE Intelligent Platforms & AutomaTech recommend that the Thin Client/Remote Desktop Server exist on a separate, dedicated Server (physical or virtual) from the HMI/SCADA Server.
- Remote Desktop Services infrastructure requires that all Servers join a Domain under the Windows Server 2012 R2 Operating System.
- Remote Desktop Services role cannot co-exist with an Active Directory Domain Controller role under the Windows Server 2012 R2 Operating System.
- As a result of the conditions outlined above, this application note will walk through the process to setup two Windows 2012 R2 Servers: a Domain Controller Server and a Remote Desktop Server referred to throughout.
- The Windows 2012 R2 Operating Systems Domain Controller Server and Remote Desktop Server have been preinstalled and setup with a default configuration.





#### 1. Installing and Configuring Active Directory Domain Services (AD DS) on a Domain Controller Server computer running Windows Server 2012 R2

In the following steps you will walk through the process to setup the Active Directory Domain Services (AD DS) Role on the Domain Controller Server computer running Windows Server 2012 R2. In order to setup the Domain Controller Server you will need to understand the IP schema of the network. It is common to use a DHCP Server in the network for automatically assigning IP addresses to Client computers. A Domain Controller must be configured with a Static IP Address, and it is best practice to assign Static IP Addresses to Servers.

this P	c			Host N IP Add User N	ame: ress: ame:	P: 19 Ac	8RV12DC 2.168.168.2 Iministrato	26 r						
								H W	∕indow	s Serve	er 2012	R2		
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**STEP 1**: Login to your Domain Controller Server computer as the local Administrator, as pictured below.





**STEP 2:** If you are using a single Domain Controller you will also need to specify the Preferred DNS server IP Address as the Server's own IP Address, as pictured below. This step is required for the Active Directory Role to successfully install since the Active Directory service requires a DNS server installed somewhere on the network. If you do not have a DNS server installed on the network, the installation process will automatically install the DNS role on this machine.

Internet Protocol Version	4 (TCP/IPv4) Properties
General	
You can get IP settings assigned autor this capability. Otherwise, you need to for the appropriate IP settings.	natically if your network supports ask your network administrator
O <u>O</u> btain an IP address automatical	у
• Use the following IP address:	
IP address:	192 . 168 . 168 . 26
S <u>u</u> bnet mask:	255.255.255.0
Default gateway:	192 . 168 . 168 . 1
Obtain DNS server address autom	natically
• Use the following DNS server add	resses:
Preferred DNS server:	192 . 168 . 168 . 26
<u>A</u> lternate DNS server:	· · ·
Valjdate settings upon exit	Ad <u>v</u> anced
	OK Cancel

**STEP 3:** You will now be ready to add the Active Directory role. Launch the **Server Manager** by clicking the icon pinned to the Task Bar. After a few moments the Dashboard will refresh with a complete list of installed Roles.

1991 (File)		Server Manager		
Server N	lanager 🕨 Dashboard		• 🕄   🏲 Manage Ioc	ols <u>V</u> iew <u>H</u> elp
<ul> <li>I Dashboard</li> <li>Local Server</li> <li>All Servers</li> <li>File and Storage Services ▷</li> <li>IIS</li> </ul>	WELCOME TO SERVER MANAGER	Add roles and features Add roles and features Add other servers to manage Create a server group Connect this server to cloud services etak 1 totak 1 totak 1 totak 1 totak 1 totak 1 totak 1 totak 2 totak 2 totak 3 totak 3 totak 4 totak 4 totak 4 totak 4 totak 4 totak 4 totak 5 totak	1 All Servers 1 The All Servers	Hide
Server Manager				- No 🖓 Go





**STEP 4:** Click the **Add roles and features** link to launch the Add Roles and Features Wizard. Select the Installation Type as **Role-based or feature-based installation** and click **Next**.



STEP 5: Select your local server name from the Server Pool and click Next.

È.	Add	Roles and Features W	Vizard 🗕 🗖	x t
Select destinati	on server		DESTINATION SE PSRV	ERVER /12DC
Before You Begin Installation Type Server Selection	Select a server or a v Select a server fr Select a virtual h	rirtual hard disk on which t om the server pool ard disk	to install roles and features.	
Server Roles Features Confirmation	Server Pool			
Results	Name PSRV12DC	192.168.168.26	Operating System Microsoft Windows Server 2012 R2 Standard	
	1 Computer(s) found This page shows sen Add Servers comma collection is still inco	t vers that are running Winc nd in Server Manager. Offi implete are not shown.	dows Server 2012, and that have been added by usin line servers and newly-added servers from which da	ng the ita
		< <u>P</u> rev	vious <u>N</u> ext > <u>I</u> nstall Can	ncel





**STEP 6:** Add the **Active Directory Domain Services** Role from the Server Roles list and click **Next**. Click **Next** on the Features list since you will not be adding new Features. You will be presented with some useful information to note on the AD DS screen, click **Next** to proceed.

Ъ	Add Roles and Features Wizard	_ 🗆 X
Active Directory I     Before You Begin     Installation Type     Server Selection     Server Roles     Features     AD DS     Confirmation     Results	Add Roles and Features Wizard Comain Services Active Directory Domain Services (AD DS) stores information about users, com on the network. AD DS helps administrators securely manage this information sharing and collaboration between users. AD DS is also required for directory- such as Microsoft Exchange Server and for other Windows Server technologies Things to note: • To help ensure that users can still log on to the network in the case of a serv minimum of two domain controllers for a domain. • AD DS requires a DNS server to be installed on the network. If you do not h installed, you will also install the DNS Server role on this machin • Installing AD DS will also install the DFS Namespaces, DFS Replication, and F which are required by AD DS.	DESTINATION SERVER     PSRV12DC     PSRV12DC     PSRV12DC     PSRV12DC     puters, and other devices     and facilitates resource     enabled applications     such as Group Policy.     rer outage, install a     ave a DNS server     e.     ile Replication services
	< <u>P</u> revious	Install Cancel

**STEP 7:** On the Confirmation screen, click **Install** to install the Active Directory Services role and you will see the installation process begin. Upon completion you can click **Close** to complete the installation process.

<b>b</b>	Add Roles and Features Wizard	_ <b>D</b> X
Installation progre	ess	DESTINATION SERVER PSRV12DC
Before You Begin	View installation progress	
Installation Type	Feature installation	
Server Selection		
Server Roles	Configuration required. Installation succeeded on PSRV12DC.	
Features	Active Directory Domain Services	^
AD DS	Additional steps are required to make this machine a domain controller.	
Confirmation	Promote this server to a domain controller	
Results	Group Policy Management	
	Remote Server Administration Tools	=
	AD DS and AD LDS Tools	
	Active Directory module for Windows PowerShell	
	AD DS Tools	
	Active Directory Administrative Center	
	AU US Snap-Ins and Command-Line lools	~
	You can close this wizard without interrupting running tasks. View task pr page again by Clicking Notifications in the command bar, and then Task I Export configuration settings	ogress or open this Details.
	< Previous Next > CI	lose Cancel





**STEP 8:** You will notice the yellow exclamation point in the Notifications area indicating additional configuration is required. Click the **Promote the Domain Controller** link to launch the Active Directory Domain Services Configuration Wizard.

ř <b>a</b>		Server Manager		_ 6 X
Server Ma	anager • Dashboard		- 宽   🍢 Manar	e Tools View Help
Server Ma	Anager > Dashboard WELCOME TO SERVER MANAGER QUICK START QUICK STAR	igure this local server d roles and features d other servers to manage eate a server group nnect this server to cloud service in File and Storage 1 Services 1 Manageability Events	Add Roles and Features     Task Details      Manageability     Events	e Tools View Help
Server Manager	Services Performance BPA results	Services Performance BPA results	Services Services Performance Performance BPA results BPA results	- 10 10 0

**STEP 9:** Select the **Add a new forest** option and specify a **Root domain name** and click **Next**. In this example AutomaTech.local will be used as the domain name.

<b>a</b> .	Active Directory Domain Services (	Configuration Wizard	_ 🗆 X
Deployment Conf	iguration		TARGET SERVER PSRV12DC
Deployment Configuration Domain Controller Options Additional Options Paths Review Options Prerequisites Check Installation Results	Select the deployment operation Add a gomain controller to an existin Add a new domain to an gxisting for Specify the domain information for this a <u>R</u> oot domain name:	ig domain est operation AutomaTech.local	
	more about deployment configurations		
	< <u>P</u> re	evious <u>N</u> ext > <u>I</u> nsta	Cancel





**STEP 10:** On the Domain Controller Options screen, select the **Forest functional level** and **Domain functional level** to meet your network's requirements. You will notice the Domain Controller will include DNS Server capability by default. Specify the **Directory Services Restore Mode (DSRM)** password and click **Next**.

🚡 Active Directory Domain Services Configuration Wizard 📃 🗖 🗙							
Domain Controlle	TARGET SERVER PSRV12DC						
Deployment Configuration Domain Controller Options DNS Options Additional Options Paths Review Options Prerequisites Check Installation Results	Select functional level of the new forest Forest functional level: Domain functional level: Specify domain controller capabilities Ommain Name System (DNS) server Soloal Catalog (GC) Read only domain controller (RODC) Type the Directory Services Restore Mor Passworg: Confirm password:	and root domain       Windows Server 2012 R2 <ul> <li>Windows Server 2012 R2</li> <li>Windows Server 2012 R2</li> <li>Ge (DSRM) password</li> <li>Mindows Server Se</li></ul>					
	< <u>Previous</u> <u>Next</u> > <u>Install</u> Cancel						

**STEP 11:** Click **Next** to accept the default DNS Options. Confirm and update the **NetBIOS domain name** if necessary and click **Next**.

	Active Directory Domain Services (	Configuration Wizard	_ 🗆 X
Additional Option	S		TARGET SERVER PSRV12DC
Deployment Configuration Domain Controller Options DNS Options Additional Options Paths Review Options Prerequisites Check Installation Results	Verify the NetBIOS name assigned to th The NetBIOS domain name:	e domain and change it if necessary AutomaTech	
	More about additional options	evious Next > Install	Cancel





**STEP 12:** Click **Next** on the Paths screen to accept the default Paths and the Review Options screen will be displayed. Click **Next** to perform a Prerequisites Check. If all the rules checks pass you will see a note and green check mark that all prerequisite checks passed successfully. Click **Install** to complete the Domain Controller Promotion process.

la 1	Active Directory Domain Services Configuration Wizard
Prerequisites Chec	target server psrv12dc
<ul> <li>All prerequisite checks pass</li> <li>Deployment Configuration</li> <li>Domain Controller Options</li> </ul>	Prerequisites need to be validated before Active Directory Domain Services is installed on this computer
DNS Options Additional Options	Rerun prerequisites check
Paths Review Options Prerequisites Check	Windows Server 2012 R2 domain controllers have a default for the security setting named "Allow cryptography algorithms compatible with Windows NT 4.0" that prevents weaker constructions with advirthmy when artabilizing careful the security change areasing.
Installation Results	For more information about this setting, see Knowledge Base article 942564 (http:// go.microsoft.com/fwlink/?Linkld=104751).
	▲ A delegation for this DNS server cannot be created because the authoritative parent zone cannot be found or it does not run Windows DNS server. If you are integrating with an existing DNS infrastructure, you should manually create a delegation to this DNS server in the parent zone to ensure reliable name resolution from outside the domain "AutomaTechLoad". Otherwise, no action is required.
	▲ If you click Install, the server automatically reboots at the end of the promotion operation. More about prerequisites
	< Previous Next > Instal Cancel

**STEP 13:** The Server will automatically restart when applying changes. Upon restart, notice you will now need to login as the Domain account including the Domain prefix.

	E AutomaTech\Administrator	
<b>6</b> ₽	Windows Server 2012 R2	





**STEP 14:** After logging in to the Domain, return to the Server Manager. The new AD DS Role has been added to the Server Manager Dashboard. You can click the link or status card for additional details about the Server Role.

à	Server Manager		- 6 ×
€ Server №	lanager • Dashboard •	③  🏲 Manage Iools	<u>V</u> iew <u>H</u> elp
Dashboard     Local Server     Local Server     All Servers     All Servers     AD DS     ONS     ONS     File and Storage Services ▷     Ke IIS	WELCOME TO SERVER MANAGER         Image: Configure this local server         Image: Configure this server to cloud services         Image: Configure this server to cloud		Hide
	Image ability     Image ability       Image ability     I	Manageability Events Services Performance BPA results	v
Server Manager			- Ro 12 Go

**STEP 15:** Click the **Tools** link at the top of the Server Manager and observe the newly added tools. Click the **Active Directory Users and Computers** link to launch the management console.

Dashboard Local Server	WELCOME TO SERVER MANAGER	Active Directory Domains and Trusts Active Directory Module for Windows PowerShell Active Directory Sites and Services
III All Servers III All Servers 교 DNS III File and Storage Services 夜 IIS	CLECK START  CLECK START  CLECK START  C. Add roles and features  Add other servers to manage  WHAT'S NEW  Create a server group  C. Connect this server to cloud services  LEARN MORE  ROLES AND SERVER GROUPS Refer 4   Server stoppen   Servers total 1	Active Directory Users and Computers ADSI Edit Computer Management Defragment and Optimize Drives Disk Cleanup DNS Event Viewer Group Policy Management Internet Information Services (IIS) Manager ISCSI Initiator Local Security Policy Microsoft Azuré Services ODBC Data Sources (34-bit) ODBC Data Sources (34-bit)
	Image ability     Image ability     Image ability     Image ability     Image ability       Image ability     Events     Services     Image ability       Services     Services     Services       Performance     BPA results     BPA results	Performance Monitor Resource Monitor Security Configuration Wizard Services System Configuration System Configuration Task Scheduler Windows Firewall with Advanced Security Windows Memory Diagnostic Windows PowerShell





**STEP 16:** Expand the **Domain** name and the **Users** folder to view a list of configured Users, Groups, and other resources. This is where you would configure various permissions and functions of each resource in the Domain. For the purposes of this example a single Domain User will be added.

8	Active Directory Users	and Computers	_ <b>D</b> X
<u>File Action View H</u> elp			
🗢 🏟 🙇 📰 📋 🖾 🔒 👔	FI 🐍 🐮 👕 🖉 🚨 🍇		
<ul> <li>Active Directory Users and Computers (P</li> <li>Saved Queries</li> <li>Baultuna Techlocal</li> <li>Builtin</li> <li>Computers</li> <li>Computers</li> <li>ForeignSecurityPrincipals</li> <li>Managed Service Accounts</li> <li>Users</li> </ul>	Name Administrator Administrator Administrator Administrator Conception Conception Conception Conception Conception Conception Computers Domain Controllers Domain Computers Dom	Type User Security Group - Domain Local Security Group - Domain Local Security Group - Obmain Local Security Group - Obmain Local Security Group - Domain Local Security Group - Global Security Group - Universal Security Group - Universal Security Group - Universal Security Group - Global Security Group - Domain Local Security Group - Domain Local Security Group - Domain Local Security Group - Domain Local	Description Built-in account for administering the comp Members of this group can have their passw Members of this group that are domain con Members of this group that are domain con Members in this group cannot have their pa DNS Administrators Group DNS clients who are permitted to perform d Designated administrators of the domain All domain guests All domain users Designated administrators of the enterprise Members of this group are Read-Only Dom Members of this group are afforded additio Servers in this group can cacess remote acc Members of this group are Read-Only Dom Designated administrator Members of this group are afforded additio Servers in this group can access remote acc Members of this group are Read-Only Dom Designated administrators of the schema Members of this group are cacess WMI reso
< III >			

**STEP 17:** Right-click the **Users** folder, select **New**, and select **User** to create a new User. Complete the next three screens with the User details and credentials and click **Finish** to create the User.

3	Active Directory Users	and Computers	_ 🗆 X
<u>File Action View Help</u>	) 🛛 🗊 🗏 🐮 🗊 🔻 🚨 🕱		
Active Directory Users and Computers [P     Saved Queries     AutomaTech.local     Gomain Controllers     Omain Controllers     Gomain Controllers     Delegate Control     Find     New     All Tasks     View     Refresh     Export List     Properties     Help	Name Administrator Administrator Computer Concenter Computer Computer Contact Group InetOrgPerson msDS-ResourcePropertyList msImaging-PSPs MSMQ Queue Alias Printer Shared Folder Shared Folder WinKIKemoteWMIUsers_	Type User Security Group - Domain Local Security Group - Domain Local Security Group - Omain Local Security Group - Omain Local Security Group - Global Security Group - Universal Security Group - Universal Security Group - Global Security Group - Domain Local Security Group - Domain Local	Description Built-in account for administering the comp Members in this group can have their passw Members of this group that are domain con Members of this group that are domain con Members in this group cannot have their pa DNS Administrators Group DNS clients who are permitted to perform d Designated administrators of the domain All workstations and servers joined to the do All workstations and servers joined to the do All domain outrollers in the domain All domain guests All domain users Designated administrators of the enterprise Members of this group are Read-Only Dom Members of this group can modify group p Built-in account for guest access to the com Local Administrator Members of this group are afforded additio Servers in this group can access remote acc Members of this group are Read-Only Dom Designated administrators of the schema Members of this group can access WMI reso
Create a new object			





**STEP 18:** In this example the Domain User 'Proficy' has been created and will be used to access the Remote Desktop Server in later steps. By default all Domain Users will be given Remote Desktop Server access, so at this point you could further define your security groups and roles if desired. These steps have completed the Domain Server configuration required at this time.

2	Active Directory Users	and Computers	_ 🗆 X			
<u>File Action View H</u> elp						
🗢 🔿 🙍 🕡 🤞 🖬	← ⇒ 2 m 4 1 × 1 0 ≥ 2 m 3 2 1 7 2 2					
<ul> <li>Active Directory Users and Computers (P</li> <li>Saved Queries</li> <li>Mutoma Tech.local</li> <li>Builtin</li> <li>Computers</li> <li>Domain Controllers</li> <li>ForeignSecurityPrincipals</li> <li>Managed Service Accounts</li> <li>Users</li> </ul>	Name Administrator Administrator Administrator Carbon CP assword Replication Group Cert Publishers Cloneable Domain Controllers Cloneable Domain Controllers Consult Controllers Comparing Domain Admins Domain Controllers Domain Controllers Domain Controllers Domain Controllers Contr	Type User Security Group - Domain Local Security Group - Domain Local Security Group - Global Security Group - Universal Security Group - Universal Security Group - Universal Security Group - Global User User Security Group - Global Security Group - Domain Local Security Group - Domain Local Security Group - Jonviersal Security Group - Domain Local Security Group - Slobal	Description Built-in account for administering the comp Members in this group can have their passw Members of this group that are domain con Members of this group that are domain con Members in this group cannot have their pa DNS Administrators Group DNS clients who are permitted to perform d Designated administrators of the domain All domain controllers in the domain All domain suers Designated administrators of the enterprise Members of this group are Read-Only Dom Members of this group can modify group p Built-in account for guest access to the com Local Administrator			
< III >						





# 2. Installing, Configuring, and Licensing Remote Desktop Services (RDS) on a Remote Desktop Server computer running Windows Server 2012 R2

Now that the Domain Controller Server setup has completed you will need to configure the Remote Desktop Server. The Remote Desktop Server will need to be joined to the Domain created in the previous section, have the necessary Roles enabled, and setup with the appropriate licensing.

Nu PC	Host Name: IP Address: User Name:	PSRV12RDS 192.168.168.27 Administrator	
		Windows Server 2012 R2	
= 2			• <b>18 19 (</b> 6)

**STEP 1**: Login to your Remote Desktop Server computer as the local Administrator, as pictured below.





**STEP 2:** Verify that you have the appropriate network settings configured and that the Domain Controller Server's IP address is configured for the **Preferred DNS server**, as pictured below.

Internet Protocol Version	4 (TCP/IPv4) Properties		
General			
You can get IP settings assigned auto this capability. Otherwise, you need to for the appropriate IP settings.	matically if your network supports o ask your network administrator		
O Obtain an IP address automatica	lly		
• Use the following IP address:			
IP address:	192 . 168 . 168 . 27		
S <u>u</u> bnet mask:	255.255.255.0		
Default gateway:	192 . 168 . 168 . 1		
Obtain DNS server address autor	matically		
• Use the following DNS server add	dresses:		
Preferred DNS server:	192 . 168 . 168 . 26		
<u>A</u> lternate DNS server:	· · ·		
Ualidate settings upon exit	Ad <u>v</u> anced		
OK Cancel			

**STEP 3:** You will now need to join the Remote Desktop Server to the Windows Domain created in the previous steps. Launch the **Server Manager** application from the Taskbar and click the **Local Server** link on the left side to view a snapshot of the Local Server configuration.

<u> </u>		Serve	r Manager		- 0	×
€ Server Ma	nager • Local Ser	ver		• 🕄   🏲 Manage Iools	⊻iew	Help
Dashboard	PROPERTIES For PSRV12RDS				TASKS	•
Local Server     All Servers     File and Storage Services	Computer name Workgroup	PSRV12RDS WORKGROUP	Last installed updates Windows Update Last checked for updates	Never Not configured Never		
ίο IIS	Windows Firewall Remote management Remote Desktop NIC Tearning Ethernet	Public: Off Enabled Disabled 192168.168.27, IPv6 enabled	Windows Error Reporting Customer Experience Improvement Program IE Enhanced Security Configuration Time zone Product ID	Off Not participating Off (UTC-05:00) Eastern Time (US & Canada) 00252-00107-96084-Aa035 (activated)		
	Operating system version Hardware information	Microsoft Windows Server 2012 R2 Standard VMware, Inc. VMware Virtual Platform	Processors Installed memory (RAM) Total disk space	Intel(R) Xeon(R) CPU X5650 @ 2.67GHz, Intel(R) Xeon( 4 G8 39.66 G8	r) CPU	1
	¢		ш			>
	EVENTS All events [ 3 total	• () • () •			TASKS	-
	Server Name ID Severity PSRV12RDS 1014 Warning PSRV12RDS 34001 Error PSRV12RDS 34001 Error	Source Log Microsoft-Windows-DNS Client Events Syst Microsoft-Windows-SharedAccess_NAT Syst Microsoft-Windows-SharedAccess_NAT Syst	Date and Time em 7/1/2015 1.09:13 PM em 7/1/2015 1.09:11 PM em 7/1/2015 1.09:11 PM			
					- 34	何(





STEP 4: Click the Computer name or Workgroup link to open the System Properties window.

	System Properties				
Computer Name Hardw	are Advanced Remote				
Windows uses the following information to identify your computer on the network.					
Computer description:					
	For example: "IIS Production Server" or "Accounting Server".				
Full computer name:	PSRV12RDS				
Workgroup:	WORKGROUP				
Workgroup: WORKGROUP To rename this computer or change its domain or Change workgroup, click Change.					
OK Cancel Apply					

**STEP 5:** Click the **Change** button to launch the Computer Name/Domain Changes window. Enter the **Domain Name** that was created in the previous section.

Computer Name/Domain Changes
You can change the name and the membership of this computer. Changes might affect access to network resources.
Computer name:
PSRV12RDS
Full computer name: PSRV12RDS
<u>M</u> ore
Member of
● <u>D</u> omain:
Automa Tech.local
○ <u>W</u> orkgroup:
WORKGROUP
OK Cancel





**STEP 6:** Click **OK** and you will be prompted with the Windows Security window, enter the Username and Password for your **Domain Administrator** account, as pictured below.

	Windows Security X
Computer Enter the name domain.	Name/Domain Changes e and password of an account with permission to join the
P	Administrator       ••••••       Domain: AutomaTech.local
	Connect a smart card
	OK Cancel

**STEP 7:** Click **OK** to authorize the addition of the computer to the Domain, you will be prompted with a welcome message, as pictured below. Click **OK** and click **OK** again when prompted that you must restart your computer to apply these changes and then **restart the computer**.







**STEP 8:** After the computer has restarted, you will need to login as the Domain User and not the Local User. Click the **Other User** link on the Windows Login screen. Specify your Administrator credentials including the new Domain Name prefix to login to the server, as pictured below.

	Other user         AutomaTech\Administrator         Sign in to: AutomaTech         How do I sign in to another domain?	
6 IP	Windows Server 2012 R2	

**STEP 9:** You will now be ready to add the Remote Desktop Services role. Launch the **Server Manager** by clicking the icon pinned to the Task Bar. After a few moments the Dashboard will refresh with a complete list of installed Roles.

ē.		Server Manag	ger		_ 6 ×
Server M	anager 🔸 Dashboard			• 🕄   🏲 Manage Iools	<u>V</u> iew <u>H</u> elp
<ul> <li>I Dashboard</li> <li>Local Server</li> <li>All Servers</li> <li>File and Storage Services ▷</li> <li>IS</li> </ul>	WELCOME TO SERVER MANAGER         QUICK START       1         QUICK START       2         LEARN MORE       5         Roles: 2   Servier groups: 1   Servers tot         Imageability       Events         Services       Performance         IPA results       1	figure this local server dd roles and features dd other servers to manage reate a server group onnect this server to cloud servi ae 1 BIS 1 Manageability Events Services Performance BPA results	Ces          Image: Local Server       1         Image: Manageability       Events         Services       Performance         DPA results       BPA results	All Servers 1     All Servers 1     Manageability     Events     Services     Performance     BPA results	Hide
					• P* 🗄 🕼





**STEP 10:** Click the **Add roles and features** link to launch the Add Roles and Features Wizard. Select the Installation Type as **Remote Desktop Services Installation** and click **Next**.



**STEP 11:** Select the **Quick Start** option for a typical deployment on a single Remote Desktop Server. If you plan to create a distributed deployment you would choose the Standard deployment option and configure some additional options. Click **Next** to continue.







STEP 12: Choose the Session-based desktop deployment option on the Deployment Scenario screen and click Next.

à	Add Roles and Features Wizard	_ 🗆 🗙
Select deploymer	nt scenario	DESTINATION SERVER Quick Start selected
Before You Begin Installation Type	Remote Desktop Services can be configured to allow users to connect to virtual o programs, and session-based desktops.	desktops, RemoteApp
Deployment Type	$\bigcirc$ <u>V</u> irtual machine-based desktop deployment	
Deployment Scenario	Virtual machine-based desktop deployment allows users to connect to virtual that include published RemoteApp programs and virtual desktops.	desktop collections
Server Selection	Session-based desktop deployment	
Completion	Session-based desktop deployment allows users to connect to session collect published RemoteApp programs and session-based desktops.	ions that include
	< <u>P</u> revious <u>N</u> ext > De	ploy Cancel

**STEP 13:** You will be prompted that the Quick Start will install the RD Connection Broker, RD Web Access, and RD Session Host services on the same server. Select your local server from the Server Pool and click **Next.** 

<b>a</b>	Add Roles and Features Wizard	_ 🗆 X
Select a server		DESTINATION SERVER Quick Start selected
Before You Begin Installation Type Deployment Type	The Quick Start will install the RD Connection Broker, RD Web Access, and R on the same server.	D Session Host role services
Deployment Type	Server Pool Selected	
Server Selection	Filter:	
Completion	Name IP Address Operating PSRV12R	DS
	PSRV12RDS.AutomaTec         192.168.168.27            III         >	
	1 Computer(s) found 1 Compute	er(s) selected
	The credentials of the AutomaTech\Administrator account will be used deployment.	to create the
	< <u>P</u> revious <u>N</u> ext >	Deploy Cancel





**STEP 14:** The Confirmation screen will perform a rules check and notify you that the server must be restarted to complete the installation. Check the **Restart the destination server automatically if required** check box and click the **Deploy** button.

<text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text>	<b>a</b>	Add Roles and Features Wizard
✓ Restart the destination server automatically if required	Confirm selection Before You Begin Installation Type Deployment Type Deployment Scenario Server Selection Confirmation Completion	Add Roles and Features Wizard
< Previous Next > Deploy Cancel		Restart the destination server automatically if required

**STEP 15:** The installation process will begin and display the progress, as pictured below. When the initial role services installation is complete the server will restart automatically.

à	Add Roles and F	eatures Wizard	_ 🗆 X
View progress			DESTINATION SERVER PSRV12RDS.AutomaTech.local
Before You Begin	The Remote Desktop Services dep	loyment scenario is being installed.	
Installation Type	Server	Progress	Status
Deployment Type	Remote Desktop Services role s	ervices	
Deployment Scenario	PSRV12RDS.AutomaTech.local		In Progress
Server Selection		Installing	
Confirmation	Session collection		
Completion	PSRV12RDS.AutomaTech.local		Pending
	Remote App programs		
	RemoteApp programs		
	PSKV12KDS.AutomaTech.local		Pending
		< Previous Next >	Deploy Cancel





**STEP 16:** After the server restarts, login again as the Domain Administrator and return to the **Server Manager**. You will see the installation progress continue. Upon completion, click the **Close** button to acknowledge that the installation succeeded.

à	Add Roles and Feat	tures Wizard	_ <b>D</b> X
View progress	The Remote Desition Services deploye	ment crenario is being installed	DESTINATION SERVER Quick Start selected
	Server	Progress	Status
	Remote Desktop Services role servi	ices	
	PSRV12RDS.AutomaTech.local	Su	ucceeded
	Session collection PSRV12RDS.AutomaTech.local RemoteApp programs	Su	ucceeded
	PSRV12RDS.AutomaTech.local	SRV12RDS.AutomaTech.local/rdweb	rcceeded
		< <u>P</u> revious <u>N</u> ext >	Close Cancel

**STEP 17:** Click on the new **Remote Desktop Services** Role available in the Server Manager Dashboard. You will see the Remote Desktop Services deployment overview screen.







**STEP 18:** You need to enable Licensing in order for Users to access the Server. Click the green **RD Licensing plus sign** to launch the Add RD Licensing Servers window. Select the Local Server from the Server Pool.

<b>B</b>	Add RD Licensing Servers
Select a server	Add RD Licensing Servers     -     -     ×   This wizard allows you to add RD Licensing servers to your deployment. Select the servers on which to install the RD Licensing role service.       Server Pool     Selected         Filter:     -     -         Name     IP Address     Operat         PSRV12RDS.AutomaTec     192.168.168.27
	( ) The credentials of the AutomaTech\Administrator account will be used to add the servers.      ( ) Previous Next > Add Cancel

**STEP 19:** Click **Next** and you will be prompted with a confirmation that The RD Licensing role service will be installed on the servers and added to the deployment. Click the **Add** button and you will be notified when the Remote Desktop Licensing role service installation succeeded, as pictured below.

L	Add RD Licensin	g Servers		x
View progress	The role service is being installed or	the following servers.	Castur	
Results	Remote Deskton Licensing role s	ervice	Status	
	PSRV12RDS.AutomaTech.lo		Succeeded	
	Review RD Licensing properties for	the deployment		
		< Previous Next >	Close Can	cel





**STEP 20:** Click **Close** to complete the installation. You will now see the blue ribbon badge indicating the RD Licensing has been installed, as pictured below.

	Server Manager	- 0
€)∋ • Server N	Manager • Remote Desktop Services • Overview	- 😂   🏲 Manage Iools View B
Overview	GET STARTED WITH REMOTE DESKTOP SERVICES	
Collections Collections QuickSessionCo D	Set up a Remote Deskt      Virtual machine-based desktop deployment     Add RD Virtualization Host servers     Create virtual desktop collections	op Services deployment           Session-based desktop deployment           ② Add RD Session Host servers           ③ Create session collections
	BEPLOYMENT OVERVIEW     RD Connection Broker server: PSRV12RDS.AutomaTechJocal     Managed as : AutomaTech/Administrator	SKS   DEPLOYMENT SERVERS Last refreshed on 7/1/2015 5:27:39 PM   All RDS role services   4 total Filter  P (ii)    (iii)
	RD Web Access RD Gateway RD Licensing	Server FODN Installed Role Service PSRV12RDS.AUTOMATECHLOCAL RD Connection Broker PSRV12RDS.AUTOMATECHLOCAL RD Session Host PSRV12RDS.AUTOMATECHLOCAL RD Livensing PSRV12RDS.AUTOMATECHLOCAL RD Web Access
	RD Connection Broker	. 0. 3

**STEP 21:** Click the **Tools** link at the top of the Server Manager and observe the newly added tools for Terminal Services. Click the **Remote Desktop Licensing Manager** link to launch the management console.







STEP 22: Expand the view, you will notice the RD Licensing Manager indicates that the server is not yet activated.

<b>%</b>		R	D Licensing Manag	er	_ <b>D</b> X
<u>Action View H</u> elp					
All servers	Name	Activation Status	Discovery Scope	Configuration	
Reports	PSRV12RDS	Not activated	Domain	Review	
< III >					

STEP 23: Right-click on the Local Server and select Activate Server to launch the Activate Server Wizard and click Next on the Welcome screen to start the activation process.

9			RD	Licensing Manag	jer			-	x
Action View Help									
<b>*</b> * * * <b>*</b>									
All servers	Name	Activation	n Status	Discovery Scope	0	Configuration			
PSRV12RDS     Windows 2000 Server	PSRV12RDS	Not activ	Refresh	Domain	F	<u>Review</u>			
Reports			Paviou	Configuration					
			Install	iconcor					
			Activat	e Server					
		L	Advand	ed	•				
			Create	Report	•				
			Delete	Reports					
			Manag	e Licenses					
			Propert	ties					
						a			
< III >									





**STEP 24:** Select the appropriate Connection Method from the list and click **Next**. Licensing can be activated automatically through your Internet connection, through a web browser, or over the phone.

	Activate Server Wizard	×
onnection Method Select the most approp	priate connection method.	<b>9</b>
The connection metho the Microsoft Clearingh	d selected for license server activation will also be used to contact nouse when licenses are installed.	
To change the connect the license server's Pro	ction method after activation, go to the Connection Method tab of operties dialog box.	
Connection method:		
Automatic connection	n (recommended) v	
Description:	This is the recommended method. The license server will automatically exchange the required information with the Microsoft Clearinghouse over the Internet.	
Requirements:	The computer must be able to connect to the Internet by using a Secure Sockets Layer (SSL) connection.	
	< Back Next >	Cancel

**STEP 25:** Complete the **Company Information** fields with the information that corresponds with to your Remote Desktop Licenses and click **Next.** 

	Activate Server Wizard	x
Company Information Provide the requested	company information.	<b>9</b>
Enter your name, compan This information is require	y name, and country/region information. d to proceed.	
<u>First name:</u>		
Last name:		
<u>C</u> ompany:		
Country or <u>R</u> egion:	United States	
Name and corr assistance. Co	pany information is used only by Microsoft to help you if you need untry/Region is required to comply with United States export restrictions	
	< <u>B</u> ack <u>N</u> ext >	Cancel





**STEP 26:** You will be prompted that the license server has been successfully activated. Obtain your Remote Desktop Server Client Access License (CAL) keys and click **Next** to start the Install Licenses Wizard.

 Activate Server Wizard	x
Completing the Activate Server Wizard	
You have completed the Activate Server Wizard.	
Status:	
 The license server has been successfully activated.	
To install licenses, click Next.	
To postpone license installation, clear the Start Install Licenses Wizard now check box, and then click Finish.	
Start Install Licenses Wizard now	
< Back Next > Ca	ancel

STEP 27: Select the appropriate License program for your licenses and click Next.

	Activate Server Wizard	x			
License Program Choose the appropriate	cense program.				
Every client that is connecting to a Remote Desktop Session Host server or a virtual desktop in a Microsoft Virtual Desktop Infrastructure must have a valid license. Select the license program through which you purchased your licenses.					
License program:	License Pack (Retail Purchase)				
Description:	This is a license purchased in preset quantities through a retail store or other reseller. The package may be labeled "Microsoft Windows Client License Pack".				
Format and location:	The license code from the License Pack will be required. The license code is a sequence of five sets of five alphanumeric characters.				
Sample:	1A2B3         1A2B3         1A2B3         1A2B3				
Verify that your license i	nformation is similar to the sample before continuing.				
	< Back Next >	Cancel			





**STEP 28:** Type in or Paste your license code(s) per your Microsoft Licensing Agreement and click **Next.** You will be notified that the licenses have been successfully activated, click **Finish** to close the activation wizard

Activate	Server Wiza	ard	x				
License Code Enter the license code found in your product	License Code Enter the license code found in your product packaging.						
Type in the license code for each license you entering each license code. The format for th digits.	Type in the license code for each license you have purchased, and then click Add after entering each license code. The format for the license code is 5 sets of 5 alphanumeric digts.						
		Add					
Li <u>c</u> ense codes entered:							
License Code	Status	Product Type					
	Pending	windows Server 2012					
< 11		Edit Delete					
	<	Back Next >	Cancel				

**STEP 29:** You will now see a summary of the Client Access License versions, types, and quantities in the RD Licensing Manager window. This server has been activated with 50 Per User RDS CALs, as pictured below.

<b>%</b>	RD Lice	RD Licensing Manager					- 🗆 X
Action View Help							
⊟- i All servers	License Version and Type	License Program	Total Licenses	Available	Issued	Expiry Date	Keypack ID
🚊 🔄 PSRV12RDS	🖶 Windows 2000 Server - Built-in TS Per Device CAL	Built-in	Unlimited	Unlimited	0	Never	2
	👼 Windows Server 2012 - Installed RDS Per User CAL	Retail Purchase	50	50	0	Never	3
Windows Server 2012 - Installed							
Reports							
< III >	<		ш				>





**STEP 30: Right-click** the server name and select the **Review Configuration** option to open the Server Configuration window.

<b>G</b>	RD Licensing Manager					- 🗆 X		
Action View Help								
🖃 🙀 All servers		License Version and Type	License Program	Total Licenses	Available	Issued	Expiry Date	Keypack ID
PSRV12RDS	D.C. 1	2000 Server - Built-in TS Per Device CA	AL Built-in	Unlimited	Unlimited	0	Never	2
- C Windov	Refresh	erver 2012 - Installed RDS Per User C/	AL Retail Purchase	50	50	0	Never	3
Reports	Review Configurat	ition						
	Install Licenses							
	Activate Server							
	Advanced	•						
	Create Report	•						
	Delete Reports							
	Manage Licenses							
	Properties							
<	>	<		Ш				>





**STEP 31:** Click the **Add to Group** button and you will be prompted to add the License Server to the Active Directory Domain Services Group. Click **Continue** to authorize the change on the Active Directory Server. When prompted that the License Server has been added to the License Servers group in Active Directory Domain Services, click **OK**.

	PSRV12RDS Configuration	x
License Server Name Discovery Scope: Do Database Location: (	:: PSRV 12RDS main Ch C: \Windows\System32\LServer\	ange Scope
This licens Active Dire	RD Licensing Manager X	Add to Group
User CALs usage of F This licens Domain Se the Remot	Terminal Server License Servers group in Active Directory Domain Services (AD DS), you must have Domain Admins privileges in AD DS. <u>Continue</u> Cancel	
	ОК	Cancel
	RD Licensing Manager	x







**STEP 32:** You will now see the completed Server Configuration and have two green check marks confirming the licensing and activation process, click **OK** to accept the changes.

	PSRV12RDS Configuration	x
License Discover Databas	Server Name: PSRV12RDS ry Scope: Domain se Location: C:\Windows\System32\LServer\	Change Scope
	This license server is a member of the Terminal Server License Servers group in Active Directory Domain Services. This license server will be able to issue RDS Per User CALs to users in the domain, and you will be able to track or report the usage of RDS Per User CALs on this license server.	
	To issue RDS Per User CALs to users in other domains, this license server must be a member of the Terminal Server License Servers group in those domains.	
	This license server is registered as a service connection point (SCP) in Active Directory Domain Services. The license server will appear in the list of known license servers in the Remote Desktop Session Host Server Configuration tool.	
	OK.	Cancel

<b>%</b>		RD Licensing Manager				_ 🗆 X	
Action View Help							
⊟- i All servers	License Version and Type	License	e Program   Total Li	censes Available	Issued	Expiry Date	Keypack ID
E PSRV12RDS	🖶 Windows 2000 Server - Built-i	TS Per Device CAL Built-in	n Unlimit	ed Unlimited	0	Never	2
	ilt-in 🛛 🗟 Windows Server 2012 - Install	d RDS Per User CAL Retail F	Purchase 50	50	0	Never	3
Windows Server 2012 - Ins	tallec						
Reports							
<	> <		1	11			>





STEP 33: Return to the Server Manager and expand the Remote Desktop Services Overview screen.

E.	Server Manager		- 6 X
Server Ma	anager + Remote Desktop Services + Overview	• 🕄   🏲 Manage Iook	<u>V</u> iew <u>H</u> elp
Servers     Servers     Collections     OuickSessionCo	anager * Remote Desktop Services * Overview         GET STARTED WITH REMOTE DESKTOP SERVICES         Image: Construction Services	Control Contro Control Control Control Control Control Control Control Control Co	
= 1 2 🗎			• 10 10 10

STEP 34: Click the Tasks drop down button and select the Edit Deployment Properties option.







**STEP 35:** The Deployment Properties window will appear. If an RD Gateway is required in your deployment, you would configure it on this screen.

<b>b</b>	Deployment Properties
Configure the dep Show All RD Gateway - RD Licensing + RD Web Access + Certificates +	Deployment Properties         L         Automatically detect RD Gateway server settings         Automatically detect RD Gateway server settings:         Server name:         Logon method:         Password Authentication         Use RD Gateway credentials for remote computers         Bypass RD Gateway server         To not use an RD Gateway server
	OK Cancel Apply

STEP 36: Click the RD Licensing section and select Per Device or Per User under the Remote Desktop licensing mode options that is relevant to your Microsoft licensing agreement. This server uses User CALs, so we will select the Per User mode, as pictured below. Click Apply to accept the changes for the RD Licensing mode.

2	Deployment Properties	-		x
Configure the dep	oloyment			
Show All RD Gateway + RD Licensing - RD Web Access + Certificates +	RD Licensing Select the Remote Desktop licensing mode: Per Device Per User Specify a license server, and then click Add: Select the order for the Remote Desktop license servers: The RD Session Host server or the RD Virtualization Host server sends to the specified license servers in the order in which you list them. PSRV12RDS.AutomaTech.local	Add requests for Move U Move Do Remove	licenses p wwn	] ; ] ]
	OK	cel <u>A</u>	pply	]





**STEP 37:** The Deployment Properties window also provides information about the RD Web Access and RDS Certificates. As an optional step you can configure Certificates for the RDS Services in order to secure the connections. Click **OK** to accept the changes.

<b>a</b>	Deployment Properti	es		_ □	x
Configure the dep Show All RD Gateway + RD Licensing + RD Web Access + Certificates -	Deployment Properti DIOYMENT Manage certificates A Remote Desktop Services deploym single sign-on, and establishing secur Current deployment certificate level i What is a certificate level? Role Service RD Connection Broker - Enable Sin RD Connection Broker - Publishing RD Web Access RD Gateway <	es ent requires certificate re connections. s Not Configured Not Configured Not Configured Not Configured Unknown III	Status	entication, State	×
	Subject name: Not Applicable View Details This certificate is required for server a deployment. You can update this certificate by cre certificate. Create new certificate	uthentication to the F ating a new certificate	Remote Desktop e or by selecting elect existing cert	Services an existing ificate	
		OK	Cancel	Apply	/

**STEP 38:** Click the **Tools** link at the top of the Server Manager and click the **RD Licensing Diagnoser** link to launch the Licensing Diagnoser window.







**STEP 39:** Upon successful configuration and licensing of Remote Desktop Services you will see a healthy RD Licensing Diagnoser status with green check mark, as pictured below.

o∰ RD Licensing Diagnoser: PSRV1	RD Licensinn Diannoker ( DSRV12RDS )	Actions
		RD Licensing Diagnoser: PSRV1
	RD Licensing Diagnoser provides information to help identify possible licensing problems for the Remote Desktop Session Host server.	Connect to Remote Desktop Sessio
	PRF D Linensine Disenseer did not identify you beensine problems for the Parente Dadrine Searche Hert searche	View
	On the product of the view way and represent the network provide provide the sector.	G Refresh
	Remote Desktop Session Host Server Configuration Details	🛛 Help
	PSRV12RDS	
	Number of licenses available for clients: 50     Deduce Control Matteriation (Sector 2012 D)	
	Active Descop Jesson nois server version, Minore Server 2012 hz	
	Licensing mode: Per User	=
	RD Licensing Diagnoser Information - 0 warning(s)	
	Securit Problem	
	RD Licensing Diagnoser did not identify any problems to report.	
	Problem Suggested Resolution	
	A	
	v	
	Remote Desktop Services License Server Information	
/	The Remote Desktop Session Host server is configured with the following License Servers. To view details about a specific license server, click the name of the license server.	~
	1	1

**STEP 40:** The final step will be to test the Remote Desktop connection. Execute **mstsc.exe** from the **Run** command or launch from the Start Screen to open the Remote Desktop Connection client application.







**STEP 41:** Enter the Fully Qualified Domain Name of the Remote Desktop Server that you are going to connect to. Click the **Connect** button to launch the Windows Security window.

Nemote Desktop Connection 📃 🗖 🗙								
Remote Desktop Connection								
Computer: PSRV12RDS.AutomaTech.local  Viser name: None specified You will be asked for credentials when you connect.								
Show Options Connect Help								

**STEP 42:** Enter the credentials for the Proficy User that was created in the earlier steps at the Active Directory Domain Server level and click **OK** to connect.

	Windows Security	x
Enter your These credent PSRV12RDS.A	credentials tials will be used to connect to utomaTech.local.	
Р	AutomaTech\Administrator	
P	AutomaTech\Proficy	
	Domain: AutomaTech	
	Connect a smart card	
Rem	ember my credentials	
	OK Cancel	





**STEP 43:** You will now see the Remote Desktop Session created for the Proficy Domain User, as pictured below. You now have successfully followed the steps required to setup and connect to a Windows 2012 R2 Server using Active Directory and Remote Desktop Services!

This PC	Host Name: IP Address: User Name:	PSRV12RDS 192.168.168.27 Proficy	
		Windows Server 2012 R2	
			- @ G





#### 3. Installing, Configuring, and Activating GE Advantage Licensing on a Local License Server for use with GE Proficy SCADA Thin Clients

Now that the Domain Controller Server and Remote Desktop Server have been successfully configured, you are ready to begin installing GE Software and Licensing. You will start by installing the necessary Proficy Licensing components on the Servers. The Domain Controller Server will act as the Proficy License Server and the Remote Desktop Server will act as the License Client where the applications will run. The License Client will periodically verify active licenses with the License Server, as depicted below.



To download the latest Proficy Licensing Software and for detailed instructions on installing and activating Proficy Licensing software please visit the GE Customer Center: <u>https://ge-ip.force.com/communities</u> or the GE Support Site: <u>http://support.ge-ip.com/licensing</u>. This app note follows the Online Activation procedures for when an Internet connection is available on the network. For Offline Activation procedures please refer to the Proficy Licensing software documentation.





 Wost Name:
 PSRV12DC:

 IP Address:
 TSV181.68.28

 User Name:
 Administrator

**STEP 1**: Login to your Domain Controller Server computer as the Domain Administrator.

STEP 2: Run the Proficy Licensing Installation application, select the Install License Server option.







**STEP 3**: After a few moments you will be notified that the Installation has completed, click the **Finish** button to complete the Proficy License Server installation.



STEP 4: Launch the Windows Services and observe that the Proficy License Server service Status is listed as Running.

		Services				x
File Action View Help						
(← →) 📰 🖾 🙆 🔛 🕨 🛛						
Services (Local)	al)					
Proficy License Serve	-r	Name 🔺	Description	Status	Startup Type	Log ^
		Performance Counter DLL	Enables rem		Manual	Loc
Stop the service		🔍 Performance Logs & Alerts	Performanc		Manual	Loc
Restart the service		🔍 Plug and Play	Enables a c	Running	Manual	Loc
		Portable Device Enumerator	Enforces gr		Manual (Trig	Loc
Description:		🔍 Power	Manages p	Running	Automatic	Loc
Manages pools of licer	nses for devices.	🎑 Print Spooler	This service	Running	Automatic	Loc
		Printer Extensions and Notif	This service		Manual	Loc
		🔍 Problem Reports and Soluti	This service		Manual	Loc
		😪 Proficy License Server	Manages p	Running	Automatic	Loc
		🌼 Remote Access Auto Conne	Creates a co		Manual	Loc
		🔍 Remote Access Connection	Manages di		Manual	Loc
		鵒 Remote Desktop Configurat	Remote Des	Running	Manual	Loc =
		鵒 Remote Desktop Services	Allows user	Running	Manual	Net
		🔍 Remote Desktop Services U	Allows the r	Running	Manual	Loc
		🔍 Remote Procedure Call (RPC)	The RPCSS	Running	Automatic	Net
		🔍 Remote Procedure Call (RP	In Windows		Manual	Net
		🔍 Remote Registry	Enables rem		Automatic (T	Loc
		Resultant Set of Policy Provi	Provides a n		Manual	Loc
		Routing and Remote Access	Offers routi		Disabled	Loc
		🤐 RPC Endpoint Mapper	Resolves RP	Running	Automatic	Net
		🔍 Secondary Logon	Enables star		Manual	Loc 🗸
		<	Ш			>
Extended Standard	/					





 Windows Server 2012 R2

 Image: The server server

STEP 5: Login to your Remote Desktop Server computer as the Domain Administrator.

STEP 6: Run the Proficy Licensing Installation application, select the Install License Client option.







**STEP 7**: Click through the prompts, accept the License Agreement, and click **Install** to install the Proficy Common Licensing application.

Proficy Common Licensing - InstallShield Wizard
Ready to Install the Program The wizard is ready to begin installation.
Click Install to begin the installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
InstallShield
< Back Install Cancel

STEP 8: Click Finish to complete the Proficy Common Licensing installation.







**STEP 9**: On the Start Screen, you will notice two new applications have been installed in the Proficy Common folder. Click the **License Server Configuration** icon.

	Apps by na	ame	×				_		م
				VMwa				Windo	ws System
-	ODBC Data Sources (64-bit)	Ð	Task Scheduler	0	start VM Statistics Logging	1	Sound Recorder	6	Administrative 1
8	Performance Monitor	1	Windows Firewall with Advanced	P	VMware vSphere Client		Steps Recorder		Command Pron
<b>M</b>	RD Licensing Diagnoser NEW	-	Windows Memory Diagnostic	Windo	ows Accessories		Windows Media Player		Control Panel
2.	Remote Desktop Licensing NEW		Windows PowerShell (x86)		Calculator	*	Windows Server Backup		Default Program
8	Resource Monitor		Windows PowerShell ISE	20	Character Map	<u>A</u>	WordPad		File Explorer
	Security Configuration Wizard		Windows PowerShell ISE (x86)		Math Input Panel		ws Ease of Access	?	Help and Suppo
2	Server Manager	Profic	y Common		Notepad	2	Magnifier	1	Run
O <sub>o</sub>	Services	3	License Documentation	ø	Paint	-	Narrator	<b>1</b>	Task Manager
	System Configuration	<b>\$</b>	License Manager NEW	-	Remote Desktop Connection	9	On-Screen Keyboard	4	This PC
9	System Information	<b>R</b> 3	License Server Configuration NEW	Se .	Snipping Tool			2	Windows Power
	•								

**STEP 10**: You will be notified that a Server Comm Failure occurred because the application is trying to communicate with a License Server running on the local machine, which does not exist. Click **OK** to accept the message and launch the Edit Server Connection Settings screen.







STEP 11: Update the settings to point to the Server Name or IP Address of the Domain Controller Server. Click the Verify Connection button to test the connection and click Save to accept the changes.



**STEP 12**: Click the **< MANAGE** link in the upper left corner to view the License Server Manager Overview screen. Take notice of the status bar at the top of the window. You are now connecting through the network to remotely access the License Server service running on the Domain Controller Server computer.







**STEP 13**: Click the **Add Licenses to Server** button in the Manage Licenses section. The Add Licenses to Server window will appear, take notice this system is Internet connected and will allow us to perform Online Activations.



**STEP 14**: Type in or paste in your activation codes and quantities then click the **Add Code** button. You will see a summary of codes listed that will be used for activation.







**STEP 15**: Click **Next** to complete the activation, when successful you will be notified on the screen when each part of the activation process has completed.

€.	Proficy License Server Configuration To	ol – 🗆 🗙
License Server IP Address: 192.168.168.26 Lice	ense Server Port: 3333 License Server Name: Local_Server License	Server ID: 000C29A9F3F1 Server Status: Connected   ⑦ HELP
Add Licenses to	Server	
Follow the steps to add A	ctivation Codes to the License Server	
Current Connection Status	Sending License Request to the Local Server	
	Sending Activation Codes to Intranet Server	Done
	Assembling License Request from Intranet Server	Done
INTERNET	Sending License Request to Internet Server	Done
	Retrieving License Response from Internet Server	Done
You	Sending License Response to Intranet Server	Done
	Intranet Server licenses have been modified.	View Licenses
INTRANET CONNECTED	BACK TO A	DD CODES DONE
© 2015 GE Intelligent Platforms, Inc. All Rights R	leserved.	Version: 14.8.419.0

**STEP 16**: Click **View Licenses** to view the newly installed licenses on the Local License Server. You will notice each license status is shown as Available, they are now ready to be assigned to the License Client. This application note demonstrates activation of Terminal Services Client licenses for both iFIX and CIMPLICITY.

<b>5</b>	Proficy License Server Configuration Tool				_ 🗆 X
License Server IP Address: 192.168.168.2	26 License Server Port: 3333 License Server Name: Local_Server License Server ID: 0000	C29A9F	3F1 Serve	er Status: Connected	I 🕜 HELP
< MANAGE					
<b>Q</b> View Server	Licenses				
Server License List			🕤 F	REFRESH DATA 🔘	SAVE LIST TO FILE
Product Name	Description	Total	Available	Activation Code	Details
Proficy iClient English	iClient v5.8 Thin-Terminal Services Development English 10 Client Demo License	1	1		Show
Proficy HMI/SCADA - CIMPLICITY English	Cimplicity v9.0 Viewer Development/Runtime Standard Viewer English 10 Terminal Services D	1	1		Show
	Nielde Des sound				
© 2015 GE Intelligent Platforms, Inc. All F	agms Reserved.			Ve	rsion: 14.8.419.0





	Apps by na	ame							Q
				VMwa	are			Windo	ws System
	ODBC Data Sources (64-bit)	Ð	Task Scheduler	0	start VM Statistics Logging	*	Sound Recorder	6	Administrative
8	Performance Monitor		Windows Firewall with Advanced	2	VMware vSphere Client		Steps Recorder	-	Command Pror
-	RD Licensing Diagnoser NEW		Windows Memory Diagnostic	Wind	ows Accessories		Windows Media Player		Control Panel
2.	Remote Desktop Licensing NEW		Windows PowerShell (x86)		Calculator	*	Windows Server Backup		Default Program
8	Resource Monitor		Windows PowerShell ISE	ap.	Character Map	<u>A</u>	WordPad		File Explorer
E.	Security Configuration Wizard		Windows PowerShell ISE (x86)		Math Input Panel	Windo	ws Ease of Access	?	Help and Supp
4	Server Manager	Profic			Notepad	2	Magnifier	1	Run
O <sub>o</sub>	Services	3	License Documentation	ø	Paint	-	Narrator	-	Task Manager
	System Configuration	<b>(</b> A)	License Manager NEW	-	Remote Desktop Connection	9	On-Screen Keyboard	4	This PC
<b>E</b>	System Information		License Server Configuration	S.	Snipping Tool			2	Windows Powe

**STEP 17**: Return to the Start Screen, click the License Manager icon.

**STEP 18**: When running in a Virtual Machine you will be notified that you will need to change your settings to use a Local License Server. Click **OK** to accept the notification and click **Continue** to acknowledge the licensing messages.







**STEP 19**: You will be directed to the Change Settings window, by default the Licensing software wants to use the GEIP License Server on the Internet.

License Source: No License Proficy Computer ID: Li	cense Type: No License	Creation Date: No License		SAVE	🚔 print 🕐 🗕 🕨
< WELCOME					
😻 Change Settings					
Change Computer Settings					
Device Name: PSRV12RDS					CONNECTION
Device Location (optional): MachineName			VERIFY (	ONNECTION	
This Device Alias will be: MachineName/PSRV12RE	)S 🚯				ONLINE
Choose a License Activation Source:					
Use GEIP License Server on the Internet		If Using an Intranet Serve	r.		
Use the GEIP License Server on the internet (Online).		License Server URL: ()			
<ul> <li>Use an intranet license server on the local r</li> </ul>	network	Port Number:			
Use a license server on the local intranet (Online). This inside a virtual machine and are not using a hardware to	is required if you are ey.	If Using Files:			
<ul> <li>Do not use a license server</li> </ul>		Use this location for files:			
This machine is not connected to a license server (Offlin	ne). Must use a file.				
			REVER	л	SAVE
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STEP 20: Select the option to Use an intranet license server on the local network, set the License Server URL to include the IP Address of your License Server (the Domain Controller Server computer). Click the Verify Connection to test the connection and click the Save button to complete the configuration, as pictured below.

License Source: No License Proficy Computer ID: License Type: No License	Creation Date: No License	💾 SAVE 🚔 PRINT 🕜 🗕 🗙
< WELCOME		
😻 Change Settings		
Change Computer Settings		
Device Name: PSRV12RDS		CONNECTION
Device Location (optional): MachineName		VERIFY CONNECTION
This Device Alias will be: MachineName/PSRV12RDS		Connection Test Sucessful ONLINE
Choose a License Activation Source.		
Use the GEIP License Server on the internet (Online)	If Using an Intranet Server: License Server URL:  http://192.168.168	26
Use an intranet license server on the local network	Port Number: 3333	.20
Use a license server on the local intranet (Online). This is required if you are inside a virtual machine and are not using a hardware key.	If Using Files:	
○ Do not use a license server	Use this location for files:	
This machine is not connected to a license server (Offline). Must use a file.		
		REVERT
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STEP 21: Click the < WELCOME link in the upper left corner to view the Proficy License Manager Overview screen.

License Source: No License Proficy Computer ID:	License Type: No License Creation Date: No License	💾 SAVE 🚔 PRINT 🕐 — 🗙
<b>i</b> Welcome to Proficy	License Manager	
What would you like to do?		
View Licenses	Manage Licenses	Change Settings
See the current licensed products and options available on this computer.	Activate or Deactivate product licenses for this computer or a hardware key plugged in to this computer. Manage Licenses for another computer or device.	Change License Manager settings.
VIEW LICENSES	MANAGE LICENSES	CHANGE SETTINGS
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STEP 22: Click the Manage Licenses button to open the Manage Licenses screen.







STEP 23: Click the Activate button to open the Activate a License screen.

License Source: No License Proficy Compute	er ID: 271JMTZ2000Z License Type: No Licen	ISE Creation Date: No License	💾 SAVE 🚔 PRINT 🕐 — 🗙
State Activate a Lice	ense		
Follow the steps to activ	vate licenses	Required Steps Extra Offline Steps	Your Licensed Products
<ul> <li>Continue Atlas</li> <li>Continue</li> <li>Click the Change Alias button to change the device description.</li> <li>Continue to the next step to enter your activation codes.</li> <li>Your computer alias (nickname) is: DefaultLocation/Computer</li> <li>CHANGE ALIAS</li> </ul>	Current Activation Codes Toro CE Intelligent Platforms to continue. Please click the button below to enter activation code for the product that will be installed on this machine. If you would like to activate licenses on a hardware key, please ensure that it is attached to this machine. If necessary, please close this program and plug in the hardware key. Restart the Proficy License Manager.		No Licensed Products
© 2015 GE Intelligent Platforms, Inc. All Rights	s Reserved.		View Licenses Version: 14.8.419.0

**STEP 24**: Click the **Enter Activations** button and you will be prompted with the Select Products to Activate window which provides a summary of the licenses installed on your Local License Server. Check the boxes to select both Product Names. Click **OK** to accept the selections.

SEL	ECT PRODUCTS TO ACTIVATE				x
4	Available Licenses				🕞 REFRESH DATA
	Product Name	Description		Activation Code	
$\checkmark$	Proficy iClient English	iClient v5.8 Thin-Terminal Services Developm	ment English 10 Client Demo Li		
$\checkmark$	Proficy HMI/SCADA - CIMPLICITY English	Cimplicity v9.0 Viewer Development/Runtime	e Standard Viewer English 10 T		
		ОК	CANCEL		





**STEP 25**: Click the **Activate** button on the Enter Activation Codes window, you will be prompted that the licenses were successfully added, click **OK**. Notice the licenses are now listed in the Your Licensed Products section.







**STEP 26**: Click the **< WELCOME** link in the upper left corner to return to the Proficy License Manager Overview screen and click the **View Licenses** button to open the View Licenses screen, as pictured below. You will notice that licenses have successfully been added for both 10 iFIX Terminal Services connection and 10 Cimplicity Terminal Services connections, successfully completing the Proficy Licensing process!

License Source: SW License Proficy Computer ID: 271JN	TZ2000Z License Type: Leased Creation Dat	le: 01 Jul 2015		💾 SAVE 🚔 PRINT 🕜 🗕 🗙
Wiow Liconcoc		CSN/Customer Info	AutomaTech Inc.	Lease Expiration: 24 Jul 2015
VIEW LICENSES		License Number:	2/1JM1220002	License Version: 3
Your Licensed Products	License Information			🕞 REFRESH DATA
SHOW ALL PRODUCTS	iFIX	iClient v5.8	Thin-Terminal Services De	velopment English 10 Client Demo
CIMPLICITY	License Expiration		No Expiration	
iFIX	Licensed Version		5.8	
	Number of Terminal Server Connections		12	
	Number of Unit Blocks		Unlimited	
	Number of Process Database Blocks		Unlimited	
	Number of Drivers Allowed		0	
	Number of OPC Connections		10	
	Number of Web Server Connections		0	
	Product Options			
	Networking		Enabled	
	Classic Historian - Historical Trend Reporting	1	Enabled	
	ODBC Access to the Process Database		Enabled	
	Recipes		Enabled	
	Fault Tolerant Computer Support		Enabled	
	Windows Security Synchronizer		Enabled	
	FIX Graphics		Enabled	
	OPC Connections		Enabled	
	SQL Database Blocks		Enabled	
	Workspace (GUI)		Enabled	
	Terminal Server		Enabled	
				•

License Source: SW License Proficy Computer ID: 271JM	TZ2000Z License Type: Leased Creation Da	te: 01 Jul 2015	💾 save 🚔 print 🕐 🗕 🗙
View Licenses		CSN/Customer Info: AutomaTech Inc. License Number: 271JMTZ2000Z	Lease Expiration: 24 Jul 2015 License Version: 3
Your Licensed Products	License Information		🛞 REFRESH DATA
SHOW ALL PRODUCTS	CIMPLICITY	Cimplicity v9.0 Viewer Development/Run Terminal Services Demo License	time Standard Viewer English 10 🖈
CIMPLICITY	License Expiration	No Expiration	
iFIX	Number of Licensed Points	Unlimited	
	Number of CNC Connections	0	
	Number of System Sentry Nodes	0	
	Number of WebView Connections	1	
	Number of Terminal Server Connections	10	
	Number of ThinView Connections	0	
	Number of GlobalView Connections	0	
	Number of Marquee Devices	0	
	Licensed Version	9.0	
	System Type		
	Development Viewer	Enabled	
	Product Options		
	OPC Server	Enabled	
	Stratus Computer	Enabled	
	Terminal Services	Enabled	
			•
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# 4. Overview of Installing and Configuring GE Proficy HMI/SCADA iFIX for use in a Remote Desktop Services Environment

This section provides a very high level overview of the steps for deploying Proficy HMI/SCADA iFIX in a Remote Desktop Services (formerly Terminal Services) Environment. For additional considerations, detailed configurations, compatibility requirements, and best practices when working with Terminal Services please refer to the iFIX Electronic Books included with the product or available on the GE Support Site: <a href="http://support.ge-ip.com">http://support.ge-ip.com</a>

**STEP 1**: Insert or connect the Proficy HMI/SCADA iFIX 5.8 media to the Remote Desktop Server computer. Click the **Install iFIX 5.8** option on the splash screen and follow the prompts to complete the installation. NOTE: iFIX 5.8 as released only supports Windows Server 2012, iFIX 5.8 SP1 is required for Windows Server 2012 R2 support. A reboot will be required after completing the iFIX 5.8 installation.







**STEP 2**: After rebooting, install iFIX 5.8 SP1 and the latest SIMs. Follow the prompts to complete the installation and you will be prompted again to restart the computer.

Proficy HMI/SCADA iFIX SIM - InstallShield Wizard					
	Welcome to the InstallShield Wizard for Proficy HMI/SCADA iFIX SIM The InstallShield® Wizard will install Proficy HMI/SCADA iFIX SIM on your computer. To continue, click Next.				
< <u>B</u> ack <u>Next&gt;</u> Cancel					

**STEP 3**: After rebooting you will need to build the necessary number of SCUs for your deployment based on requirements for Users, Roles, Projects, Security, etc. in your system architecture. For this example, two simple SCUs have been created, one for the iFIX Service account (RDSBOOT) and another for the Client access (RDSCLNT). Two project folders have been created with the appropriate iFIX files for RDSBOOT and RDSCLNT, as pictured below.

🎍 l ⊋ 🖺 = l	Projects	;		_ □	x
File Home Share	View				~ <b>?</b>
⋲ 💿 🔻 🕆 📕 🕨 Th	is PC → Local Disk (C:) → Projects	Ý	🖒 Search Project	5	Q
☆ Favorites	Name	Date modified	Туре	Size	
Desktop	🐌 RDSBOOT	7/2/2015 4:11 PM	File folder		,
🗼 Downloads	🐌 RDSCLNT	7/2/2015 4:10 PM	File folder		
🔚 Recent places					
🌉 This PC					
Network					
T					
2 items					:==





**STEP 4**: Open the RDSBOOT.SCU and edit the Local Startup properties. **Assign a Node Name** to identify the local session for the Remote Desktop Services Server (like RDSSRV) and **link the RDSBOOT.SCU Configuration File** for the Service account, as pictured below. Check the boxes for **Continue running after Logoff** and **Start iFIX at system boot** to ensure that iFIX runs as a Service and starts automatically without user interaction.

	SCU - RDSBOOT	<b>– – X</b>
File Configure Help		
	Configuration File for Node FIX	
	Local Startup Definition       ?       ×         Local Node Name:       RDSSRV	
	Start FIX at system boot	





**STEP 5**: Open the RDSCLNT.SCU and confirm that Workspace.exe is listed in the Task Configuration to ensure that iFIX Workspace starts when clients connect to the Remote Desktop Server.

1 <u>11</u>	SCU - RDSCLNT	<b>– – X</b>
File Configu	ure Help	
	Configuration File for Node RDSBOO	Т
7.9.9.1	Task Configuration	? ×
	Filename: C:\PROGRAM FILES (X86)\PROFICY\PF	Start Up Mode
	Command Line:	Normal     Background
	Configured Tasks:	
	C:\PROGRAM FILES (X86)\PROFICY\PROFICY IFIX\WORKSP	Add
		Change
		<b>↓</b>
		Delete
	OK Cancel Help	

**STEP 6**: Reboot the server, with the updated configuration iFIX will start automatically at system boot. Open the Windows Services to confirm that iFIX is running, as pictured below.

		Services			_ □	x
File Action View	Help					
(+ +) 🔲 🗐	2 🛃 🚺 🖬 🕨 🗉 🕪					
Services (Local)	Services (Local)					
	Proficy HMI/SCADA iFIX server	Name	Description	Status	Startup Type	1^
		🌼 Performance Counter DLL Host	Enables rem		Manual	
	Stop the service	🌼 Performance Logs & Alerts	Performanc		Manual	
	Restart the service	🔍 Plug and Play	Enables a c	Running	Manual	1
		🔍 Portable Device Enumerator Se	Enforces gr	Running	Manual (Trig	1
	Description:	🔍 Power	Manages p	Running	Automatic	
	Manages Proficy HMI/SCADA iFIX	🌼 Print Spooler	This service	Running	Automatic	
	services	🌼 Printer Extensions and Notificat	This service		Manual	
		🌼 Problem Reports and Solutions	This service		Manual	
		🙀 Proficy HMI/SCADA iFIX server	Manages Pr	Running	Automatic	
		🌼 Proficy iFIX Background Sched	Processes iF		Manual	1
		🌼 Proficy iFIX OPC Alarms and Ev	Provides ala		Manual	[≡]
		🌼 Proficy iFIX OPC Data Access S	Provides da		Manual	
		🌼 Proficy Licensing	Manages Li	Running	Automatic	
		鵒 Remote Access Auto Connecti	Creates a co		Manual	
		🎑 Remote Access Connection Ma	Manages di		Manual	
		鵒 Remote Desktop Configuration	Remote Des	Running	Manual	
		🎑 Remote Desktop Connection B	Enables a us	Running	Automatic	
		🎑 Remote Desktop Licensing	Provides re	Running	Automatic	- ( - )
		🎑 Remote Desktop Management	Manageme		Automatic (D	1
		🎑 Remote Desktop Services	Allows user	Running	Manual	1
		🎑 Remote Desktop Services User	Allows the r	Running	Manual	$\sim$
		<	l.			>
	Extended Standard					





**STEP 7**: On the Start Screen, browse to the Proficy HMI SCADA – FIX 5.8 folder and click on the **Startup Profile Manager** icon.

			م
		VMware	
My-T-Soft Logon Utilities NEW	Electronic Books	start VM Statistics Logging	Sound Record
My-T-Soft Setup NEW	IFIX 5.8 NEW	VMware vSphere Client	🔢 Steps Recorde
My-T-Soft Welcome NEW	iFIX WorkSpace NEW	Windows Accessories	🚺 Windows Med
		Calculator	😻 Windows Serv
License Documentation	OPC Help	Character Map	WordPad
License Manager	OPC PowerTool NEW	Math Input Panel	Windows Ease of Aco
License Server Configuration	OPC Release Notes	Notepad	Magnifier
Proficy HMI SCADA - iFIX 5.8	SM2 Driver Manual	刻 Paint	Narrator
Backup & Restore Wizard NEW	Startup Profile Manager NEW	Remote Desktop Connection	On-Screen Key
Data Server Installer NEW	System Configuration NEW	Snipping Tool	
	Image: Second	Image: Sector Sector Vibilities NEW       Image: Sector Sector NEW         Image: My-T-Soft Logon Ubilities NEW       Image: Sector Sector NEW         Image: My-T-Soft Setup NEW       Image: Sector NEW         Image: My-T-Soft Welcome NEW       Image: Sector NEW         Image: My-T-Soft Welcome NEW       Image: Sector NEW         Image: My-T-Soft Welcome NEW       Image: Sector NEW         Image: New-Common       Image: Sector NEW         Image: License Documentation       Image: OPC Help         Image: License Manager       Image: OPC Release Notes         Image: License Server Configuration       Image: OPC Release Notes         Image: License Server Configuration       Image: Sector Manual         Image: Sector Wizard NEW       Image: Startup Profile Manager NEW         Image: Data Server Installer NEW       Image: System Configuration NEW	Image: Solution of the second of the seco

**STEP 8**: Notice by default, the Startup Profile manager is blank, you will have the ability to link iFIX Project Files and SCUs like the ones created in the earlier steps. The Startup Profiles allow you to associate Windows Users with a specific iFIX Project Configuration. For complete details on working with the Startup Profile Manager and iFIX Projects please refer to the iFIX Electronic Books.

暍		Startup Profile Manager		_ 🗆 X
File Settings Help				
iFIX Startup Profiles				
Windows User 🔺	iFIX Nodename	SCU File	SCU Det ^	bbA
				<u> </u>
				Edit
			=	
				Remove
				Help
			×	
	m			
Default SCU:	<none></none>			Close





STEP 9: In this application note, we configure a very simple iFIX Terminal Services setup using the Startup Profile Manager. We will configure a default SCU for the iFIX Service and another SCU for the Proficy User that was created in the earlier steps. Click the Settings option in the Menu Bar and select Default Startup Profile to open the Default Startup Profile options window. In the Default Service SCU section, specify a Service NodeName and Service SCU File, as pictured below. Click OK to accept the changes.

Default Startup Profile
Default Client SCU
The Default SCU, if enabled, will determine the iFIX Startup configuration for Windows users who are not configured within the Startup Profile Manager application. The default iFIX Nodename will be the Windows username, truncated to 8 characters.
Enable Default SCU
Default SCU File:
SCU File Description:
Default iFIX Startup Options
The following iFIX Startup Option settings will be applied to all Windows users who start iFIX but are not configured within the Startup Profile Manager application.
✓ Allow User to Run Sample System
✓ Allow User to Modify Nodename and SCU
Default Service SCU
The Default Service SCU, if enabled, will determine the iFIX Startup configuration for services running on this machine. The default iFIX Nodename will be the service name truncated to 8 characters.
☑ Default Service Startup Parameter
Service NodeName: RDSB00T
Service SCU File: C:\Projects\RDSB00T\LOCAL\RDSB00T.SCU
SCU File Description: Configuration File for Node RDSBOOT
OK Cancel Help





STEP 10: You will now link a profile to the Proficy User. Click the Add button to launch the Add Startup Profile window. You will notice you can browse the local computer or the Domain accounts by clicking the List Domain Members button. Browse the Domain and select the Proficy User that was created earlier. Browse to the RDSCLNT.SCU file that to link these two together, as pictured below. You can edit the other settings if necessary based on the user, click OK to accept the changes and add the profile.

	Add Startup Profile					
Domain: Auto	maTech 🗸	List Domain Members				
Select a <u>W</u> indows ( Administrator Guest krbtgt LocalAdmin Proficy	user from the list, or enter u	ser name manually:				
Windows <u>U</u> ser:	Proficy					
iFIX <u>N</u> odename:	Proficy					
SCU <u>F</u> ile:	C:\Projects\RDSCLNT\L	OCAL\RDSCLNT.SCU				
SCU Description:	Configuration File for Nod	le RDSBOOT				
FIX Startup Options ✓ Allow user to run <u>S</u> ample System ✓ Allow User to <u>M</u> odify Nodename and SCU						
Add Profile	<u>o</u> k <u>c</u>	2ancel <u>H</u> elp				





**STEP 11**: You can add the necessary number of profiles to the Startup Profiles list to fit your system architecture. **Save** the changes in the Startup Profile Manager and click **Close.** 

唱		Startup Profile Manager		– 🗆 X
File Settings Help				
iFIX Startup Profiles				
Windows User 🔺	iFIX Nodename	SCU File	SCU Des A	Add
Proficy	PROFICY	C:\Projects\RDSCLNT\LOCAL\RDSCL	N <sup>®</sup> Configuration File	Auu
				Edit
			=	
		-		
			——————————————————————————————————————	Remove
				in the second
				Help
<	Ш		>	
Default SCU:	<none></none>			Close





STEP 12: Launch a Remote Desktop client session and login to the Remote Desktop Server as the Proficy User
Based on the permissions, you will be brought to the Desktop.

i inis PC		Host Name: IP Address: User Name:	PSRV12RDS 192.168.168.27 Proficy	
iFIX 5.8				
			Windows Sonver 2012 P2	
			Windows Server 2012 N2	
	2 👸		- Ia	9 G

**STEP 13**: Double-click the **iFIX 5.8** icon located on the desktop to open the Proficy iFIX Startup window. Based on the configuration in the Startup Profile Manager, you will see the appropriate node name and SCU file has been linked to this user.

		Proficy iFIX Startup
Proficy iFIX	Start Proficy i <u>F</u> IX w Node Name: SCU File: Description:	ith these settings: PROFICY C:\Projects\RDSCLNT\LOCAL\RDSCLNT.SCU Configuration File for Node RDSB00T
SCU	Run the System Co Allows you to	onfiguration Utility configure the iFIX system.
Desktop Sł	nortcut Create a desktop s Create a short	hortcut cut on your desktop using the settings listed above.
🗌 Don't sł	now this dialog box a	igain; always start Proficy iFIX. Exit





**STEP 14**: Click the orange **Start Proficy iFIX with these settings** button to launch the iClient session for this user. You will now see the iFIX Remote Desktop session for this user, successfully completing the basics of configuring iFIX in a Remote Desktop Services environment!

R BEZZE ·	Proficy iFIX WorkSpace (Run)	_ 0 ×
<b>2</b>	Overview.grf	×
Node Na User Na SCADA	ame: PROFICY me: PROFICY Tag: 186.39	
For Help, press F1	Ru	n CAP NUM SCRI
- 📥 🛛 🚔 🔣 🕷		- 🗄 🕒





# 5. Overview of Installing and Configuring GE Proficy HMI/SCADA CIMPLICITY for use in a Remote Desktop Services Environment

This section provides a very high level overview of the steps for deploying Proficy HMI/SCADA CIMPLICITY in a Remote Desktop Services (formerly Terminal Services) Environment. For additional considerations, detailed configurations, compatibility requirements, and best practices when working with Terminal Services please refer to the CIMPLICITY Electronic Books included with the product or available on the GE Support Site: <u>http://support.ge-ip.com</u>

**STEP 1**: Insert or connect the Proficy HMI/SCADA CIMPLICITY 9.0 R2 media to the Remote Desktop Server computer. Click the **Install CIMPLICITY Viewer** option on the splash screen and follow the prompts to complete the installation. NOTE: You also have the option to perform a full CIMPLICITY Server installation if you require access to the CIMPLICITY development environment like Workbench and CimEdit.







**STEP 2**: After completing the installation and rebooting, install the latest CIMPLICITY SIM. Follow the prompts to complete the installation process.

HMI-9.0.000007 - InstallShield Wizard					
	InstallShield Wizard Complete The InstallShield Wizard has successfully installed HMI-9.0.000007. Click Finish to exit the wizard.				
	K Back Finish Cancel				

**STEP 3**: Now you will need setup CIMPLICITY to run as a Windows Service. Click **CIMPLICITY Options** from the Start Screen.

٨	nnc			0
A	$PPS$ by name $\sim$			تر
	Proficy HMI SCADA - CIMPLICITY 9.0			Windows Accessories
ogon Utilities NEW	Alarm Sound Manager NEW	Process Control NEW	ОРС Нер	Calculator
etup NEW	Alarm Viewer NEW	Show Users NEW	OPC PowerTool NEW	Character Map
Velcome NEW	CimLayout NEW	Status Log NEW	OPC Release Notes	Math Input Panel
		Proficy HMI SCADA - iFIX 5.8	SM2 Driver Manual	Notepad
nt Platforms Up NEW		Backup & Restore Wizard NEW	Startup Profile Manager	🧭 Paint
umentation	Deployment Configuration NEW	Data Server Installer NEW	System Configuration NEW	Remote Desktop Connection
lager	DGR NEW	Electronic Books	VMware	Snipping Tool
er Configuration	Integrate with Windows Fire NEW	IFIX 5.8 NEW	start VM Statistics Logging	Sound Recorder
IP Update Notification	Login Panel NEW		VMware vSphere Client	Steps Recorder
	Point Control Panel NEW	Eogin		Windows Media Player
•				





**STEP 4**: Switch to the **Startup Options** tab and select the **Start as viewer** option in the System boot options section. Click **OK** to accept the changes and reboot the computer.

2	(	CIMPLICITY®	Options			x
Historian Connec	tions	WebView/Th	inView	Broad	dcast Ses	sions
Projects	Sta	irtup Options	Secu	rity	Hos	sts
Computer name: P	SRV12R	DS				
Accept conn	ections	Allow compre	ssed conne	ctions		
Use secure s	sockets	Allow uncomp	pressed con	nections		
Prefer compressed connections						
		Compression valu	Je: 6			
System boot opti	ons					
○ None		Start as viewed	er	⊖ Sta	t projects	
					\dd )elete	
	0	K Canc	el	Apply		Help

**STEP 5**: Return to the **CIMPLICITY Options** and confirm that VIEWER is present in the Running Projects list on the Projects tab, as pictured below.

<b>*</b>	C	IMPLICITY®	Options		- 🗆 X
Historian Connec	tions	WebView/Th	inView	Broa	dcast Sessions
Projects	Star	tup Options	Secu	urity	Hosts
Computer name :	PSRV12	RDS		~	Connect
- Running projects					Start Viewer
VIEWER					
					Stop
Projects					
					Add
					Start
					Delete
	0	K Cano	el	Apply	Help





**STEP 6**: Launch a Remote Desktop client session and login to the Remote Desktop Server as the Proficy User. Based on the permissions, you will be brought to the Desktop. A CIMPLICITY CimView shortcut was manually copied to the Desktop after installation.



**STEP 7**: You now can connect to CIMPLICITY projects running on the network. Click **Point Control Panel** from the Start Screen to launch a new Point Control Panel window.

A	1212			
Ар	$OS$ by name $\backsim$			م
	Proficy HMI SCADA - CIMPLICITY 9.0			Windows Accessories
oft Logon Utilities NEW	Alarm Sound Manager NEW	Process Control NEW	OPC Help	Calculator
oft Setup NEW	Alarm Viewer NEW	Show Users NEW	OPC PowerTool NEW	Character Map
oft Welcome NEW		Status Log NEW	OPC Release Notes	Math Input Panel
'n		Proficy HMI SCADA - IFIX 5.8	SM2 Driver Manual	Notepad
ligent Platforms Up NEW		Backup & Restore Wizard NEW	Startup Profile Manager NEW	🧭 Paint
Documentation	Deployment Configuration NEW	Data Server Installer NEW	System Configuration NEW	Remote Desktop Connection
Manager NEW	DGR NEW	Electronic Books	VMware	Snipping Tool
Server Configuration NEW	Integrate with Windows Fire NEW	iFIX 5.8 NEW	start VM Statistics Logging	Sound Recorder
I GEIP Update Notification	Iogin Panel NEW	iFIX WorkSpace NEW	VMware vSphere Client	Steps Recorder
	Point Control Panel NEW			Windows Media Player
۲				





### **STEP 8**: Click the **Add Points** button and browse for your SCADA project and add a Point to confirm communications between the Remote Desktop Server and the SCADA Server.

E Untitled - Point Control Panel					x		
File Edit Font View Help							
□ 🛩 🖬 🖻 🕇 🕊 🖾 😭 💓 🗶 🖉	× 4 2 2 2 8						
Point ID	Value Units	Timestamp	Description				
\\SCADA\ProficyCompany.StudentPlant.North.	198.282852	7/6/15 14:58:50.635602 PM	North Site Process A Temperature				
For Help, press F1				NUM			





**STEP 9**: In order connect to your SCADA server you will need to properly qualify the Points with CimView. Right-click the CimView icon on the desktop open the **Properties**. Edit the Target field to include the **/project** switch and the **path of your initial Screen**, as pictured below. Click **OK** to accept the changes.

CimView Properties							
Security	Details Previous Versions						
General	Shortcut Compatibility						
CimView							
Target type:	Target type: Application						
Target location:	Target location: exe						
<u>T</u> arget:	v.exe" /project SCADA C:\Screens\Overview.cim						
<u>S</u> tart in:	"C:\Program Files (x86)\Proficy\Proficy CIMPLICI"						
Shortcut <u>k</u> ey:	None						
<u>R</u> un:	Normal window						
Comment:	Comment:						
Open <u>F</u> ile Lo	ocation Change Icon Advanced						
	OK Cancel Apply						





**STEP 10**: Double-click the **CimView** icon on the Desktop. You will now see the CIMPLICITY Remote Desktop session for this user, successfully completing the basics of configuring CIMPLICITY in a Remote Desktop Services environment!

