Purpose & Scope

The purpose of this document is to provide business advantages, system administrator installation, and end-user access procedures for the use of Remote Desktop (RD) Web Access for Instrument Manager (IM).

Contents

Overview of RD Web Access

What is RD Web Access?

Remote Desktop Web Access (RD Web Access) is a technology from Microsoft that provides an alternative deployment method for users to access Instrument Manager (IM) other than the traditional IM thin client method. It uses Microsoft Remote Desktop Web Connection to provide user access to IM via a web browser.

This Microsoft technology allows users to access an application installed on another PC through an internet connection. Remote Desktop Web Connection, available when using RD Web Access, allows users to access an application running on another PC with appropriate permissions.

What are the benefits of RD Web Access versus traditional thin client installation?

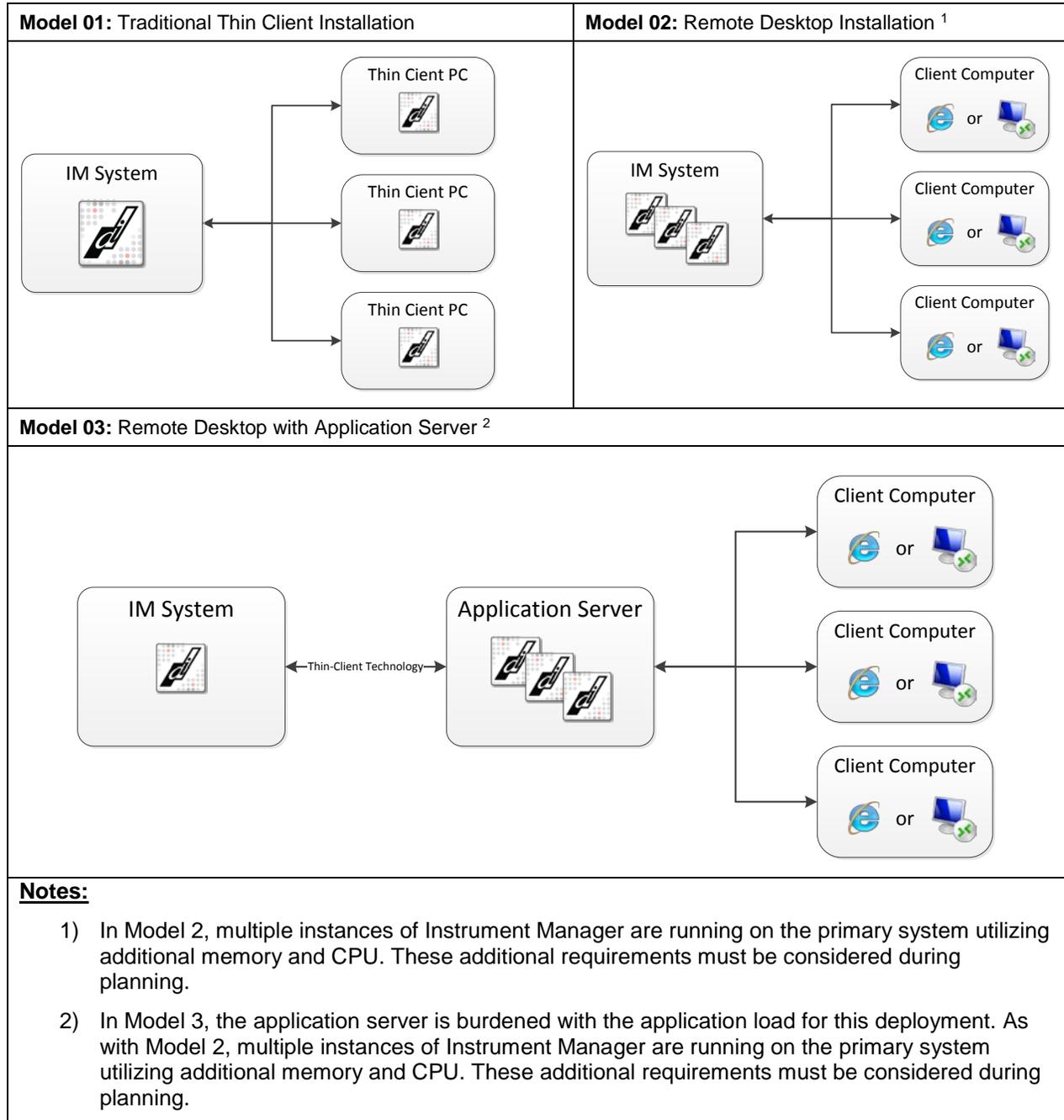| Benefits	Details
Faster Deployment Time and Reduced Maintenance	Whether it is for initial deployment or upgrading to a new version, it eliminates the need to install or upgrade IM thin client software on each computer system that requires access to IM.
Streamlined Installation	Unlike IM thin client installations, remote desktop technology requires neither modification of the IMOPTION.ini file, nor sharing of an IM directory on the server.
Increased Deployment Scalability	You can use remote desktop technology to eliminate the need to update numerous IM thin client PCs manually during installation or upgrades: • You can connect to IM using only your Internet Explorer browser on a client PC. • Or, you can create a Windows install file, which is typically much smaller (< 700 KB) than a full thin client IM installation. Using remote desktop technology, the software can be pushed out and run on a client PC as part of your organization's IT policy.
Secured Connectivity and Reduced Bandwidth Requirements	Data can be optionally secured via SSL certificate. Further, data security is improved because data is never physically sent to or stored on the client PC. Instead of transferring data to thin client PCs for display, network traffic with remote desktop technology consists only of "screen scrape" data—so data is live on the server PC only. Better security as File and Print Sharing do not have to be enabled on the server to access Instrument Manager.

Before You Begin

Understanding remote desktop vs. thin client technologies

Before you set up remote desktop technology, it is recommended that you review IM thin client concepts, installation, system requirements, and administrator workflows, which are described in the *Instrument Manager Installer's Guide.*

In addition, for an overview about remote desktop technologies, see Microsoft's website:

http://technet.microsoft.com/en-us/library/dd759202.aspx

This high-level network diagram compares instances of full IM installations, depending upon thin client or remote technologies:

Model 01: Traditional Thin Client Installation

Model 02: Remote Desktop Installation [1]

Model 03: Remote Desktop with Application Server [2]

Thin-Client Technology

Notes:

1) In Model 2, multiple instances of Instrument Manager are running on the primary system utilizing additional memory and CPU. These additional requirements must be considered during planning.

2) In Model 3, the application server is burdened with the application load for this deployment. As with Model 2, multiple instances of Instrument Manager are running on the primary system utilizing additional memory and CPU. These additional requirements must be considered during planning.

Verifying System Requirements

Primary System or Server

In order to use RD Web Access for IM, the primary IM system must have the following requirements:

- Windows 2008 R2 Server (64-bit) or a Windows 7 (64-bit) system
- A digital security certificate if you wish to apply it to the .rdp file for web URL access
- 256MB of additional Memory needed per client PC connected (depends on functionality used within Instrument Manager)

The following is needed to perform RD Web Access setup:

- Server Login Credentials (Windows login and password)
- Server Host Name

Client PC

Confirm system requirements for the client PC that will use RD Web Access:

- Microsoft Internet Explorer v6.0 or greater is required for best ActiveX Client Control performance.

  Note: Other browsers such as Google Chrome, Mozilla Firefox, etc… maybe compatible with Microsoft's Remote Desktop Web (RD Web) but have not been tested and capabilities and/or restrictions are unknown.

- Client computers must be have a version f Remote Desktop Connection (RDC) that supports at least Remote Desktop Protocol (RDP) 6.1.
- ActiveX Client Control must be installed and active.
- The client PC does not need to be a Windows 7 or Windows 2008 Server. Rather, it can be a Windows XP PC, for example.
- If you are using Windows XP for the client PC, be sure to install SP3.

Setting up RD Web Access for IM

Overview of Access Methods

Your users can access IM using two available remote desktop technology methods. Remote desktop technology setup varies slightly, depending upon your chosen access method.

Overview of Windows Installation access

Using a Windows Installation, users can double-click on a desktop or start menu icon to access IM. This access method simulates running IM on the user's PC; however, IM is actually running on the server.
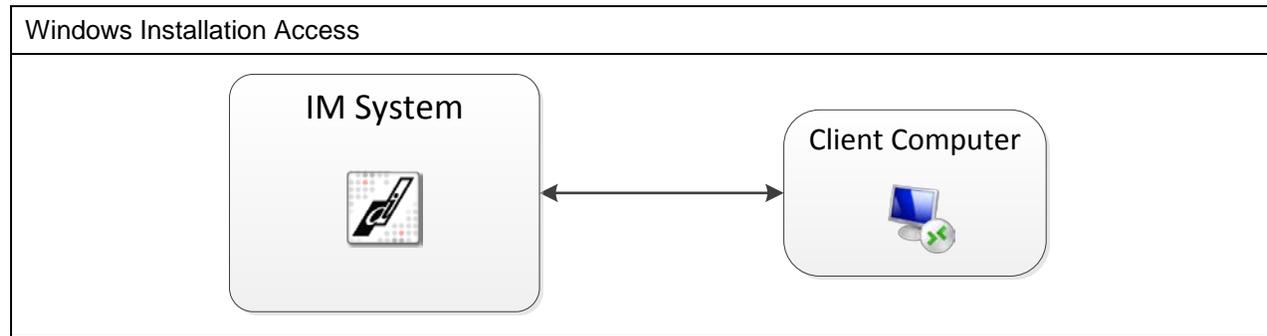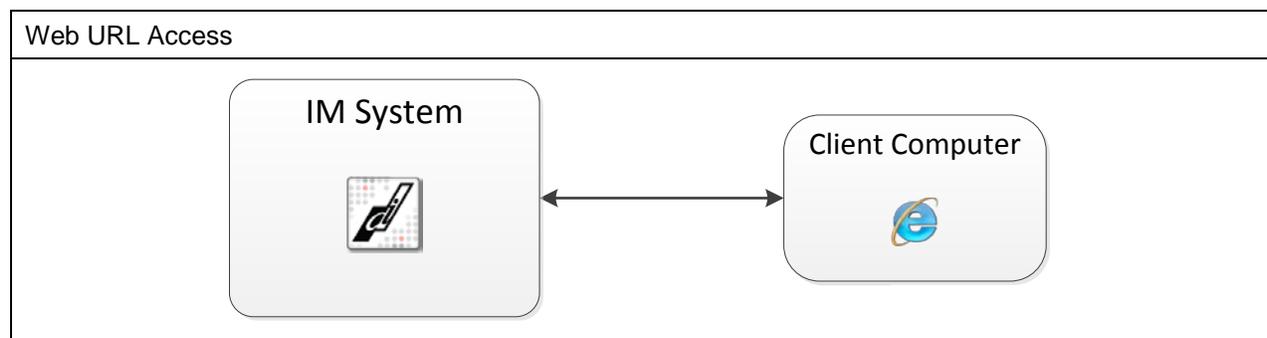
Windows Installation Access

Steps for setting up this access method include:

#	Step / Description
1	Set up the server.
2	On the server, create a Windows Install Microsoft Installer (.msi) file.
3	Install the .msi file on the client PC.

Overview of Web URL access

Using a Web URL, users can access IM through an ActiveX control running inside Internet Explorer's browser to launch Instrument Manager. In this mode, IM still runs on the server.

Web URL Access

Steps for setting up this access method include:

#	Step / Description
1	Set up the server.
2	On the server, create and modify a Remote Desktop Protocol (.rdp) file.
3	Enable the client PC to connect to the server.

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Setting up the Server

To install RD Web Access:

1. On the server, download the **Remote Server Management Toolkit** from Microsoft:
   http://www.microsoft.com/download/en/details.aspx?displaylang=en&id=7887

2. To install the toolkit, double-click the downloaded file.

3. In the installation wizard dialogue boxes, follow the instructions to install remote desktop tools.

To enable RD Web Access:

To set up RD Web Access on the same server, enable Remote Desktop Services:

#	Step / Description
1	On the server, go to **Server Manager > Roles > Add Roles**.
2	Click **Next**.
3	Check **Remote Desktop Services** and **Web Server (IIS)**.
4	Click **Next**.
5	Click **Next**.
6	Check **Remote Desktop Session Host** and **Remote Desktop Web Access**.
NOTE: If you are prompted for required role services, accept the call by clicking Add Required Role Services.	
7	Click **Next**.
8	Check **Do not require Network Level Authentication**.
9	Click **Next**.
10	Check **Configure Later**.
11	Click **Next**.
12	Accept that the only user or user groups configured is **Administrators.**
13	Click **Next**.
14	On the **Configure Client Experience** dialogue, accept the defaults and then click **Next**.
15	On the **Web Server (IIS)** tab, click **Next**.
16	On the **Roles Services** tab, click **Next**.
17	On the **Confirm Installation Selections** tab, click **Install**.
18	Wait for the installation to complete.
19	Click **Close**.
20	Follow the instructions to shut down the server, then reboot the server.
21	In the final installation completion dialogue box, click **Close**.
22	Go to **Start > Run**.
23	In the command prompt, type **services.msc**, then press **Enter**.

Set up the Windows Install:

To create a Windows Install .msi file:

#	Step / Description
1	On the server, go to **Server Manager > Roles > Remote Desktop Services**.
2	Click **RemoteApp Manager**.
3	In the **RemoteApp Manager**, in the bottom of the horizontal middle grid, right-click **Add RemoteApp Programs**.
4	In the **RemoteApp Wizard**, select **Instrument Manager**, then click **Next**.
5	On the next screen, click **Finish**.
6	In the grid that is displayed, right-click the **Instrument Manager** entry that you just created, then select **Create Windows Installer Package**.
7	In the initial **Create Windows Installer Package Wizard** screen, click **Next**.
8	In the next wizard dialogue box, do one of the following: • Note the default location where the wizard saves the installer file (e.g., C:\Program Files\Packaged Programs). • Browse to a preferred location where the wizard saves the installer file.
9	Click **Next**.
10	In the wizard dialogue box, check **Desktop** and **Start Menu Folder**.
11	Click **Next**.
12	Click **Finish**. A Windows Explorer window is opened to the folder you chose in step 5.

To install the Windows Install .msi file on the client PC:

#	Step / Description
1	From the server folder where you created the Windows Install .msi file, copy the **Instrument Manager.msi** file from this server.
TIP: For example, to copy and paste the .msi file, use the network or a thumb drive.	
2	Paste the .msi file to the PC that you want to use a client PC.
3	On the client PC, double-click the .msi file to run the Windows installation.
4	Once the installation is complete, double-click the IM icon that the installation automatically put on the desktop. (This is the IM executable file.)
5	In the **RemoteApp** dialogue box, click **Connect**.
6	Log in using credentials for the server.

NOTE: If you are prompted that there is a missing certificate (i.e., that the server cannot be identified), ignore the message and click OK.

To verify the Windows Install setup:

#	Step / Description
1	On the client PC, access the IM executable file.
2	Log in to IM as Administrator (IM_ADMIN).
3	Go to **System > Status of Instrument Manager Sessions**. In the **Status of Instrument Manager Sessions** screen, note the **PC Name** and **IP Address**.
4	On the client PC, go to **Start > Run**.
5	Type **cmd**.
6	In the command prompt, type **ipconfig**, then press **Enter**.
7	Verify that the PC client name and IP address match those in the session of IM.

Set up the Web URL

To create an .rdp file:

#	Step / Description
1	On the server, go to **Server Manager > Roles > Remote Desktop Services**.
2	Click **RemoteApp Manager**.
3	In the **RemoteApp Manager**, in the bottom of the horizontal middle grid, right-click **Add RemoteApp Programs**.
4	In the **RemoteApp Wizard**, select **Instrument Manager**.
5	Click **Next**.
6	Click **Finish**.
7	In the grid that is displayed, right-click the **Instrument Manager** entry that you just created, then click **Create .rdp File**.
8	Click **Next**.
9	In the initial **Remote App Wizard** screen, click **Next**.
10	In **Specify Package Settings**, in **Enter the location to save the packages**, do one of the following: • Note the default location where the .rdp file is saved (e.g., C:\Program Files\Packaged Programs) • Browse to a new location where you want to save the .rdp file.
11	Click **Next**
12	In **Remote Desktop Session Host Settings**, click **Change to modify the server name or the Remote Desktop Protocol (RDP) port number**.
13	Click **OK**
14	In **RD Gateway Settings**, click **Change to modify or to configure whether clients will use an RD Gateway server to connect to the target RD Session Host server across a firewall**.
15	Click **OK**
16	In the **Certificate Settings**, click **Change to select or to change the certificate to use**.
17	Select the certificate that you want use to digitally sign the .rdp file, and then click **OK**.

To enable the client PC to connect to the server:

#	Step / Description
1	On the client PC, use Internet Explorer to access: https://<server-name>/rdweb
	NOTE: In the above URL, replace <server-name> with the hostname of the server where the Instrument Manager application was placed.
2	If you are prompted for your network login and password, enter that information.
3	Click **OK**.
4	In the **Remote Desktop Services Default Connection** screen, do the following: • Note whether your ActiveX control is installed or not. • If you are running Windows XP, follow the instructions to ensure SP3 is installed before continuing.
5	Activate the ActiveX control by the following sequence:
6	In Internet Explorer, go to **Tools > Manage Add-Ons > Enable or Disable Add-Ons**.
7	In the Disabled list, check **Microsoft Terminal Services Client Control (redist)**.
8	Select **Enable**.
9	Click **OK**.
10	Close Internet Explorer.

To verify the Web URL setup:

#	Step / Description
1	On the client PC, use Internet Explorer to access: https://<server-name>/rdweb
	NOTE: In the above URL, replace <server-name> with the hostname of the server where the Instrument Manager application was placed.
2	When prompted, log in. An IM icon is displayed on the website.
3	Click the IM icon. A connection dialogue box is displayed
4	Click **Connect**.
5	Log in with your network credentials.
6	If the certificate on the remote computer cannot not be authenticated when prompted to continue, ignore this warning and then click **Yes**.
	NOTE: You are now logged into an instance of IM, which is running through the ActiveX control that was already part of Windows

Accessing IM with RD Web Access

Windows Install

To access IM with RD Web Access via a Windows Install:

#	Step / Description
1	On the client PC, access the IM executable shortcut file.
2	Log in to IM.

Web URL

To access IM with RD Web Access via a Web URL:

#	Step / Description
1	On the client PC, use Internet Explorer to access: https://<server-name>/rdweb
NOTE: In the above URL, replace <server-name> with the hostname of the server where the Instrument Manager application was placed.	
2	When prompted, log in. An IM icon is displayed on the website.
3	Click the IM icon. A connection dialogue box is displayed.
4	Click **Connect**.
5	Log in with your network credentials.