
HomeRun

Installation Guide

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Centerfield Technology, Inc.

<http://www.centerfieldtechnology.com>

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1 System i installation

1.1 Prerequisites

The HomeRun toolset requires specific System i and Windows hardware and software before it will install and perform correctly.

OS/400 versions supported:

- ✓ OS/400 V5R3, V5R4, or V6R1
- ✓ TCP/IP configured

Here is the list of required IBM PTFs by release:

- ✓ V5R3:
 - MF34816, MF33782, SI12938, SI13432, SI13245, SI14274, SI14782, SI19716, SI24085, SI23483, SI17723, SI17968, SI23364, SI21673, SI16566, SI30203, SI29088, SI30145, SI30146, SI33966, SI35067
- ✓ V5R3M5:
 - MF40395, SI12938, SI13432, SI13245, SI14274, SI14782, SI19716, SI24085, SI23483, SI17723, SI17968, SI23364, SI30203, SI29088, SI30145, SI30146, SI33966, SI35067
- ✓ V5R4:
 - MF39418, MF39419, MF39466, SI24100, SI23714, SI23713, SI24580, SI23891, SI23890, SI24569, SI24504, SI23485, SI25668, SI25041, SI23365, SI23514, SI28951, SI28952, SI28953, SI30076, SI30013, SI30014, SI31631, SI31633, SI33967
- ✓ V5R4M5:
 - SI24100, SI23714, SI23713, SI24580, SI23891, SI23890, SI24569, SI24504, SI23485, SI25668, SI25041, SI23365, SI23514, SI28951, SI28952, SI28953, SI30076, SI30013, SI30014, SI31631, SI31633, SI33967
- ✓ V6R1:
 - SI31727, SI31641, SI31407, SI33968, SI35391

NOTE: PTFs listed above are current with the release date of this document. Centerfield may learn of new PTFs after the document release so we strongly encourage you to check our website for latest PTF requirements – www.centerfieldtechnology.com

1.2 Preparing for installation

This section details several things you need to be aware of before installing the Centerfield server on your System i.

- This product uses TCP/IP to communicate between the System i and the personal computer. TCP/IP needs to be configured before the HomeRun server will function. Before continuing, make sure your Windows PC can *ping* the System i. See one of the following System i references for information on configuring TCP/IP.
 - *TCP/IP Fastpath Setup (SC41-3430)*
 - *TCP/IP Configuration and Reference (SC41-3420)*
- The default subsystem used by the HomeRun server is XCSBS70 as shipped with the product. While it is possible to use another subsystem, it is recommended that the default be used to fully isolate the HomeRun server.
- For more detailed information about the HomeRun System i installation, see the section titled *System-Wide Installation Impacts*. It is not necessary for you to review this information before the installation. However, if your environment has special requirements, you may want to review this section before installation in order to determine the impact of the HomeRun installation.

1.3 General information

This section lists the basic information about the Centerfield server and how it is installed on your system.

- The HomeRun server installs into a library named **XCENTER70**. The rest of the document refers to this library as the program library “*{program library}*”. *The installation process will copy over existing programs if the library exists.*
- The HomeRun data files install into a library named **XCENTERD70**. The rest of this document refers to this library as the data library “*{data library}*”. *The installation process will selectively replace the data files and preserve information specific to your configuration and settings if they exist. If a prior version of the server exists, configuration data will optionally be migrated to the new library. Performance and historical data can be migrated during the install as well. Since data migration is potentially a long-running operation, this process can be done at a later time using the MGRDTA command.*
- This version of the product uses TCP/IP port number 9920 by default. The rest of

this document refers to this port as the default port “**{default port}**“. If that port is in use, the installation will incrementally search for unused port numbers starting at **{default port}** and continue looking until one is found. To determine the port that was chosen use the following command:

WRKSRVTBLE SERVICE(CENTERFIELD_SERVER_VM)

The service name for HomeRun is CENTERFIELD_SERVER_VM (where VM is the version and modification level for the current installation and will vary across different installation versions).

- If you are installing over the top of an existing HomeRun product library, the jobs currently using that library will be ended before the installation begins. The server will be re-started at the end of the installation if a valid password is entered during the install, or if you have installed over an existing library that already has at least one valid license.

1.4 Installation steps

1.4.1 Who should use these steps

All users should follow this installation procedure.

If you have previously installed the Centerfield server on this System i machine, you must also read and follow Step 2 as described below. You can use the DSPOBJD OBJ(*{program library}*) OBJTYPE(*LIB) command to verify if you have installed HomeRun in the past.

There are two types of installations for the Centerfield server. The **first type** of installation is where a previous program and data library exist but have different names from the previous release (normal migration path). In this case, the new installation will create program and data libraries with different names and optionally migrate configuration information to the new server. This type of install has fewer prerequisites because the exiting installation libraries are not modified. This is called a **new-version** install.

The **second type** of installation is where the program and data libraries are being installed over the top of the existing libraries with identical names (exceptional migration path). Extra considerations are necessary with this type of installation because jobs on the system may be actively using programs and data files that are being replaced by the install procedure. This is called an **over-the-top** (OTT) install.

1.4.2 Migration of data from a previous installation

If you have a version of the Centerfield server installed, there are two types of information in the data library. The first type is configuration or control data. This information is optionally migrated to the new installation.

The second type of data is performance and historical information. This data is also optionally migrated to the new installation. During the install process described in Step 3, you will be presented an option to migrate this data during the install or wait until a later time. If you are doing the install while in restricted state (only required by OTT install), it is recommended that you migrate the data at a later time to minimize the length of time your system is unavailable.

The next sections explain the steps necessary for each type of installation.

1.4.3 Step 1 – Getting started

- Sign on to a 5250 session with QSECOFR or a user profile that has security officer special authorities. This user profile must have a minimum of *ALLOBJ, *IOSYSCFG, *JOBCTL, *SECADM, and *SAVSYS special authorities.
- The system value QUSEADPAUT must be set to *NONE.
You can verify and change this system value using the following command.
WRKSYSVAL QUSEADPAUT

In addition, if the system value QUSEADPAUT is secured with an authorization list, the user profile used for the installation must be on that authorization list.

1.4.4 Step 2 – Over-the-top only

You can continue to “Step 3” (section 1.4.5) if this is a new-version install (normal migration path). This section describes the additional steps necessary for a successful installation when replacing the program and data libraries with those from media or save files.

- **IMPORTANT:** If you were previously using insure/MONITOR, insure/SECURITY, or insure/RESOURCES **we recommend you perform the over-the-top install in restricted state**, because that ensures there will be no locks held on files in the data library (e.g. XCMONJRN, XCMONOP, XCOPTXT, database monitor files). It also ensures that any Centerfield exit points are not being used by IBM servers.

If going into restricted state is not possible, and you are using one of the products listed above, you must follow these steps before beginning the installation:

- Remove the Centerfield program entries at each exit point being covered by Centerfield programs. You should do this via the RMVMON command (or RMVUAEMON command on previous versions of HomeRun).

NOTE: you do not have to run RMVMON command unless you have ran ADDMON in the past (or ADDUAEMON on previous versions of HomeRun). To verify if you have exit points presently registered on your System i perform

```
WRKREGINF OUTPUT(*PRINT)
```

and search the spool file for any exit point program in a library with a library that starts with the letters “XCENTER”. If there are none and you haven’t ran RMVMON to remove them yet, you can safely assume that over the top install should not require going to restricted state.

- End the System i servers associated with each exit point. Note that during the installation, users will not be able to access any of the interfaces for which you have ended servers. For example, if you end the host server for *DATABASE, users will not be able to use ODBC while the installation is in progress. This means you must plan the HomeRun server installation for a time when users will not be affected (i.e. off core business hours).

The following chart lists the server you need to end if you were covering the exit point interface shown with a Centerfield program. If an interface is not included in this chart, either it is not possible or not necessary to end the server on the System i

If you used this option on ADDMON or ADDMON commands	Run this command to end the System i server
*CSCM, *CSCONV, *CSLM	ENDHOSTSVR *CENTRAL
*DTAQ	ENDHOSTSVR *DTAQ
*FILSRV	ENDTCPSVR *NETSVR ENDSBS QSERVER
*IBMODBC	ENDHOSTSVR *DATABASE ENDPJ SBS(QUSRWRK) PGM(QSYS/QZDASOINIT) ENDPJ SBS(QUSRWRK) PGM(QSYS/QZDASSINIT)
*IBMFTP	ENDTCPSVR *FTP
*NETPRT	ENDHOSTSVR *NETPRT
*REXEC	ENDTCPSVR *REXEC
*RMTCALL	ENDHOSTSVR *RMTCMD
*SOCKSRV	ENDHOSTSVR *SIGNON

- If you ended the QSERVER subsystem in the previous step, restart it now with the command

STRSBS QSERVER

Note that there is no need to end and restart this subsystem unless you were previously using a Centerfield exit program at the file server exit point (see chart above).

- Remove the Centerfield program entries from any commands where they may have been used as command validation programs. This can be done via the

RMVQCEXIT command in the program library. The commands which could be affected include OPNQRYP, RUNSQLSTM, RUNQRY, and STRSQL.

1.4.5 Step 3 – New-Version install

- Place the CD-ROM containing the HomeRun product into your primary CD-ROM drive and issue the following command.

LODRUN *OPT

- One or more of the following screens may appear during the install depending on the existence of a currently installed Centerfield server. Each screen has information about your options and the conditions that may need to be changed for the install to succeed.
 - A warning that registered exit points have been found and a recommendation to exit the install and follow the instructions in Step 2 above.
 - An information screen to say the current Centerfield server programs are to be ended.
 - A screen informing you the installation can not continue because there are locks that will prevent a successful installation. Typically this means that the instructions in Step 2 must be followed.
 - A screen giving you the option to migrate configuration, performance, and audit data. These screens will only appear if a previous installation has been detected.

You can reconfigure the server's subsystem after the installation by running the CFGSVR command located in the *{program library}*.

If you have no special work management needs, you are encouraged to use the default XCSBS70 subsystem.

- If you are prompted to enter the Centerfield License Password, enter the license password that was provided with your product and press Enter. The license password is based on the serial number of the System i and the current partition (LPAR number). A different license password is needed for each System i and LPAR that you install the software on.

If you do not know the Centerfield license password for your System i you can skip this step of the installation by pressing F12. You can enter the license password after the installation by running the PASSWORD command from the *{program library}*. If you defer adding the license password, the HomeRun server will not start automatically. No client machines will be able to connect to the System i using any

of the HomeRun tools until the password is entered.

- You will be returned to a System i command line when the installation is complete. If you did not skip any of the installation steps, the HomeRun server will automatically start. If you skipped any steps in the installation process, you should perform the configuration steps that you skipped before you continue.

If you skipped configuring the server or the license password as part of the installation, or if the server did not automatically start as part of the product installation, you need to start the HomeRun server before clients can connect to the System i using any of the HomeRun tools. Prior to trying to start the server, you should ensure that TCP/IP is active on your system. If it is not active, issue the following command using the correct options for starting the TCP/IP servers on your system.

`STRTCP STRSVR(*YES/*NO)`

Issue the following command to start the HomeRun server:

`STRSVR`

- Verify the server is active in the subsystem that you specified. The job name will be XCSERVER. The following command can be used to check for the active job and to verify that the subsystem is correct.

`WRKACTJOB JOB(XCSERVER)`

- If you ended host servers or TCP servers on the System i you can now restart them. It is important to do this step *after* running the ADDMON command.
- The server will need to be restarted every time the associated subsystem is ended or when the QUSRWRK subsystem is restarted. You may add the STRSVR command to your system startup routine (system value QSTRUPPGM) or add an auto start job entry in the subsystem if you would like to automatically start the server if you do not use the QUSRWRK subsystem. If you start the server in your system startup procedure, the OS/400 command STRTCP must be issued and TCP must be completely started before the server will start.

1.4.6 Post install configuration

1.4.6.1 insure/SECURITY, insure/MONITOR considerations

If you plan to use insure/SECURITY or insure/MONITOR, you will need to register Centerfield's exit point programs with the System i registration facility using the following command in the program library:

```
ADDMON
```

This enables the policies you define to take effect. More information can be found in the manuals for each of these tools.

NOTE: you will have to recycle the host servers for the exit point registration to take effect (refer to the appropriate manual detailed information).

If you plan to use the file server exit point program (ADDMON *FILSRV), end subsystem QSERVER and restart it. *Note that this is only necessary for the *FILSRV option.*

If you installed the HomeRun server to run from the QSERVER subsystem, you will need to restart it (STRSVR) after restarting the subsystem.

1.4.6.2 insure/RESOURCES considerations

If you plan to use insure/RESOURCES or you used the RMVQCEXIT command before the installation, you must add policy managers before your resource policies will take effect. This can be done either with the ADDQCEXIT command or with the menus in insure/RESOURCES PC client GUI.

To enforce insure/RESOURCE policies for ODBC or JDBC, the database server jobs will need to be ended and restarted (i.e. ENHOSTSVR *DATABASE, ENDPJ QUSRWRK QZDASOINIT, STRHOSTSVR *DATABASE).

More information can be found in the insure/RESOURCES manual.

1.4.6.3 insure/INDEX & insure/ANALYSIS considerations

If you plan to use insure/INDEX & insure/ANALYSIS job filter feature immediately upon install (database monitor collection filtering on job name, subsystem or job user), keep in mind that subsystems where jobs run need to be recycled (ended/restarted) in

order for that support to take effect. If you don't intend to use those collection filters, no action is required. Any scheduled IPLs or restricted state back-ups will take care of subsystem jobs recycling as well.

Subsystem recycling is a one-time post-install action.

2 PC Installation

2.1 Prerequisites

- Windows 32-bit Operating System (Windows 2000, Windows XP, Vista, Windows 7)
- 2x (minimum) CD-ROM drive
- A default printer configured
- Minimum 80486 @ 66Mhz, 32 MB RAM
- 50 MB of disk space for product
- TCP/IP installed and configured
- ODBC driver installed

2.2 Installation Steps

We recommend installing the client with the Administrator authority.

1. Place the CD-ROM containing the HomeRun product into your CD-ROM drive.
2. From the Start|Run menu enter the following setup command.

d:\SETUP.EXE where *d* is the CD-ROM drive letter.

3. Follow the online instructions to complete the installation. All the HomeRun tools will be listed for you to choose from.
4. If the installation needed to replace DLLs, you will be prompted to restart your system.
5. You may now use the HomeRun tools for which you have a license.

3 Centerfield window service installation on the OneWorld® Terminal Server (Citrix)

If you have a previously installed Centerfield Technology's Citrix Service you will need to uninstall the previous version. Please refer to the document "uninstall.doc" section "Removing Centerfield windows service running on Terminal Server (for customers using insure/MONITOR for OneWorld® only)" located on your product CD.
After you have successfully uninstalled your previous version please install the new version from this CD.

3.1 Who should follow these steps

These instruction apply **only** to customers that are running JDE OneWorld® (a.k.a. PeopleSoft EnterpriseOne®) on their System i and have purchased insure/Monitor for EnterpriseOne. Further, customers are using Terminal Servers in their environment and require Centerfield windows service running on those TS to achieve correlation of System i ODBC jobs to the OneWorld users.

If these conditions do **NOT** apply to your scenario, do **NOT** follow these installation steps.

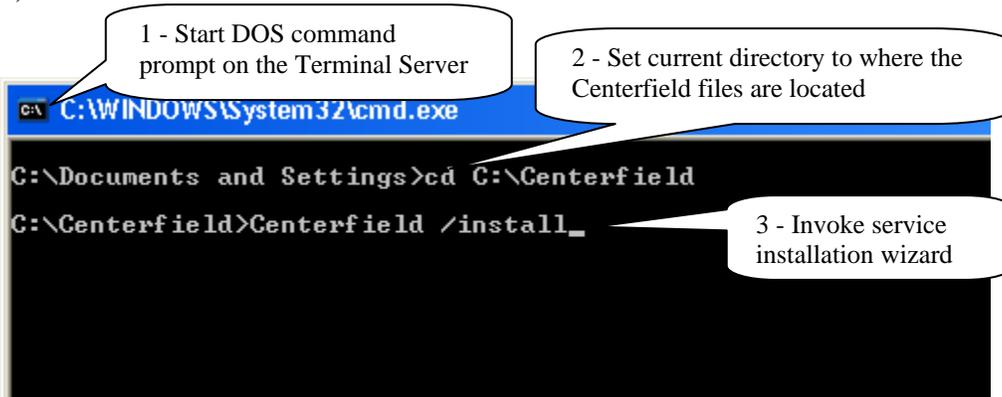
These instructions are to be performed by the Terminal Server administrator (i.e. OneWorld® CNC specialist) with Administrator authority to the server.

3.2 Prerequisites

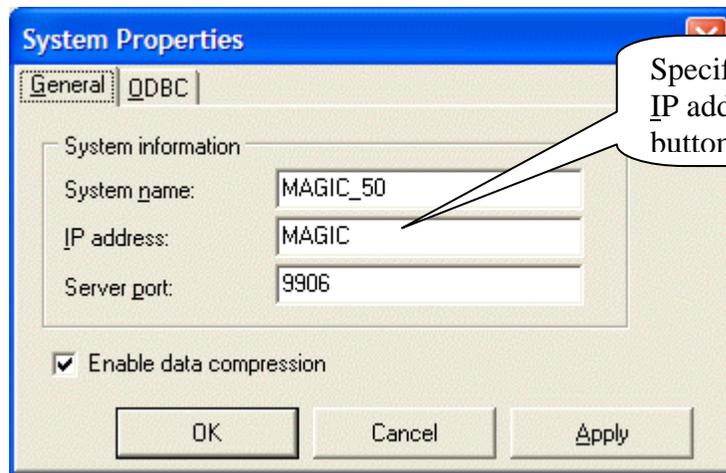
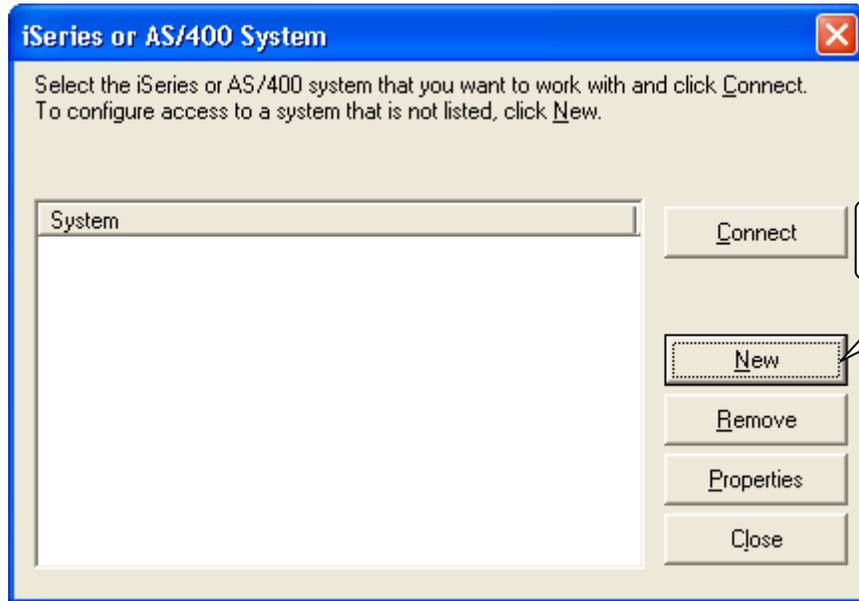
- ✓ Windows NT Server, Windows 2000 Server, Windows 2003 Server

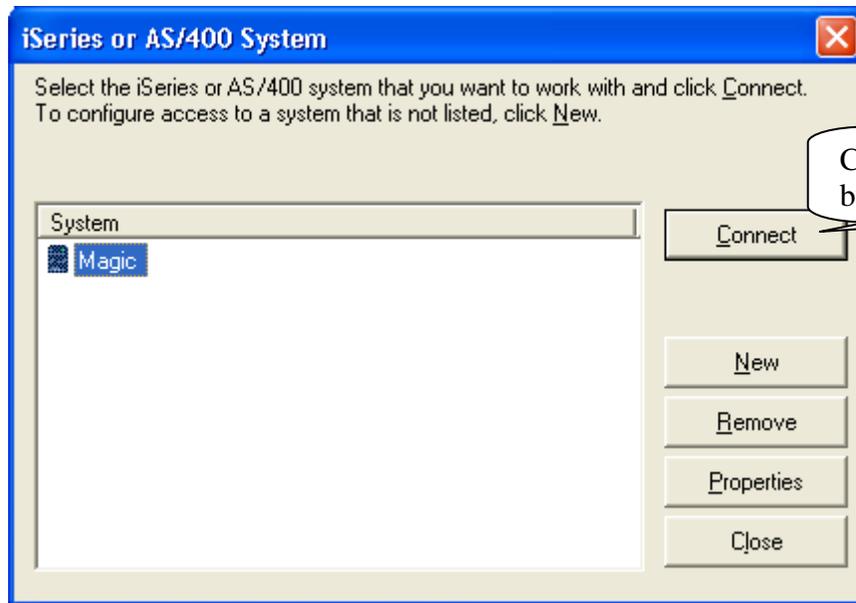
3.3 Installation steps

- 1) Locate **Centerfield.exe**, **Centerfield.dll** and **CenterfieldServiceConfiguration.exe** on the installation CD using Windows Explorer
- 2) Create a new folder on the Terminal Server (i.e. C:\Centerfield)
- 3) Copy and paste **Centerfield.exe**, **Centerfield.dll** and **CenterfieldServiceConfiguration.exe** to the newly created folder
- 4)

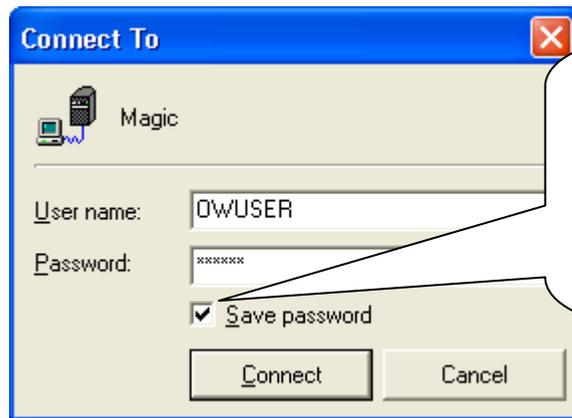


5) Several one time configuration windows will appear.





Click on Connect button



Specify System i profile and password, the "Save password" box should default to checked. If not make sure you **check** the Save password checkbox then hit the Connect button.



Default 'push data to IBM System i™' interval is 15 seconds, but you can change it at this time. Good rule of thumb is to use 5 seconds per Terminal Server on which our service is running (i.e. 8 * 5 = 40 seconds). When done click OK button



Upon successful installation of the Centerfield Terminal Server windows service you will see this window. Click OK to return to DOS prompt screen.



```
C:\WINDOWS\System32\cmd.exe

C:\Documents and Settings>cd C:\Centerfield
C:\Centerfield>Centerfield /install
C:\Centerfield>net start "Centerfield Service"
The Centerfield Service service is starting.
The Centerfield Service service was started successfully.

C:\Centerfield>_
```

start Centerfield window service

6)

You can check Centerfield service status in a couple of ways. One is to invoke the services applet via Start->Run->services.msc. Another is to check for the existence of Centerfield.exe process in the Task Manager on the Terminal Server.

If there are active OneWorld connections on the Terminal Server, there should be an XCCLIENT job on the System i with the joblog message:
“Serving Terminal Server at IP address 0.0.0.0.” where 0.0.0.0 will list the true IP address of the Terminal Server. If there are no active OneWorld connections on the Terminal Server, Centerfield service will not push any data to the System i

This completes the Centerfield service installation on the Terminal Server. Service should auto-start every time Terminal Server reboots. For the Centerfield service to push data, XCSERVER job needs to be active on the System i. You can start it by executing the STRSVR command, or automate this by adding STRSVR command to your IPL startup routine (DSPPYSVAL QSTRUPPGM).

There is one final configuration step that has to be performed from the insure/MONITOR for OneWorld® PC client. Refer to the documentation located under section **“Configuration for OneWorld® customers”** in the **“insure Monitor User Guide and Reference”** document for details on this step.



4 Connecting to the server for the first time

Once you have the product installed, you are ready to connect to the server from the Windows based workstations. The workstation installation adds a program group to your start menu called *Centerfield HomeRun*. Within the program group there are one more features that can be selected depending on the options that were selected at installation time. To start the HomeRun tool you want to use, choose its name from this group.

The HomeRun tools use a consistent interface for connecting to the System i. When you start one of the HomeRun tools for the first time on your workstation, you will need to configure your connection to a server.

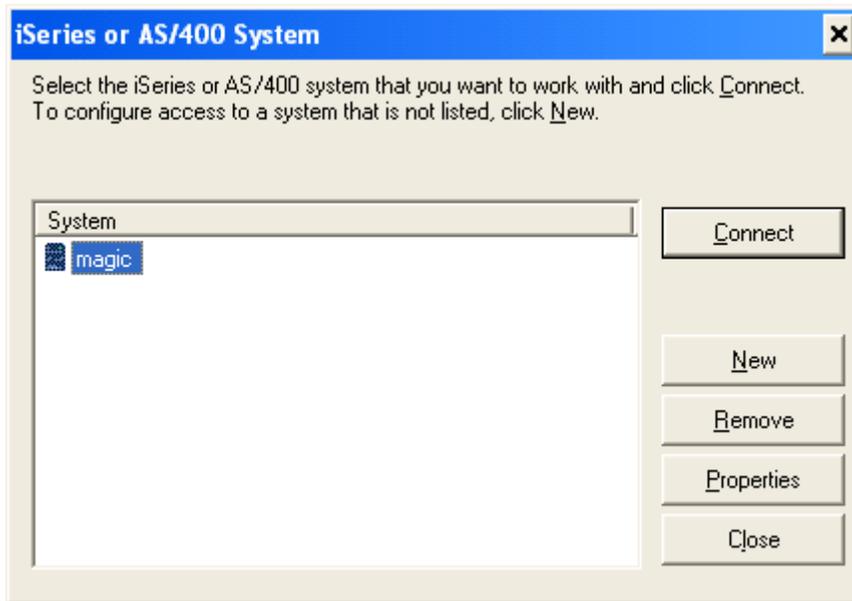
Auto-configuration

When you start the tool, it will try to auto-detect the System i in your environment and configure itself to connect to them.

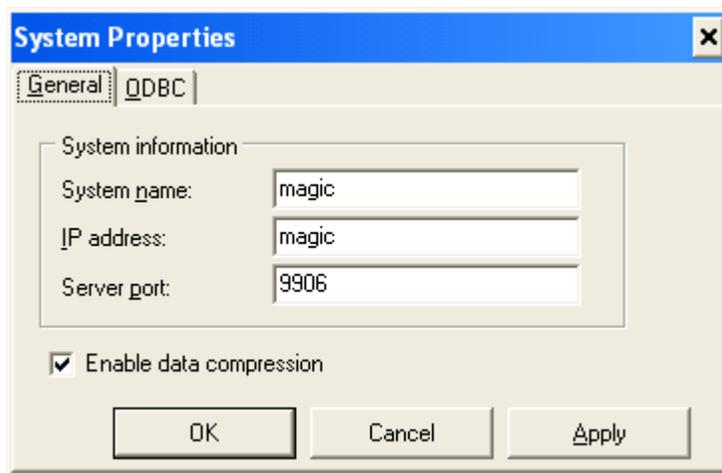
The auto-configuration interface will show you all of the systems that it can detect. If no systems are detected, the auto-configuration will be skipped and you will need to define your system connection information manually.

Manual configuration

If the auto-configuration interface did not detect your system, or you want to manually configure a connection, use the following instructions.



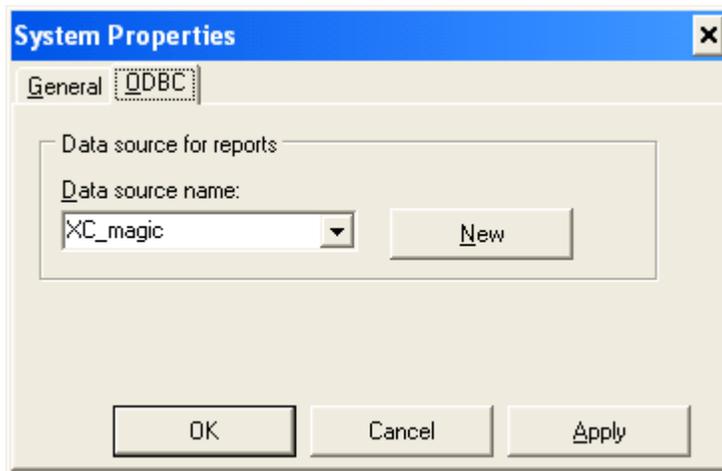
When the *System i* window is displayed, press [New] to add a new system.



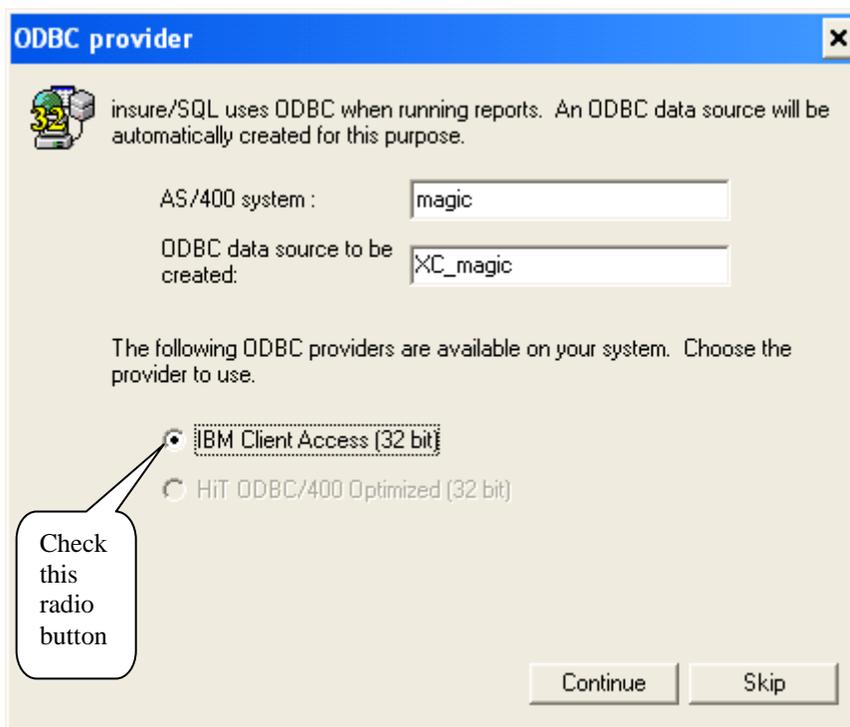
For *System name*, enter a descriptive name that identifies your system.

For *IP address*, enter either the symbolic name or dotted IP address for your System i

For the *TCP/IP port*, use the port that was selected during the System i installation process, by default {**default port**} is used.



On the *ODBC* tab, specify a name for your ODBC data source and press [**New**] to create a data source for this system. If you already have a Client Access ODBC data source that is configured to your system, you can specify your existing data source. If you choose to create a data source, you will see a display similar to the following.



Specify the name of the System i as defined in your connection software, and select the data source type that you want, and press [**Continue**]. You must have the IBM ODBC driver installed to use this fast path interface for creating your data source. If you have another ODBC provider, you must create the data source with the ODBC Administrator

utility that is provided with Windows and then specify the data source name within the *System Properties* window on the *ODBC* tab.

After you have created your data source and specified values for all of the appropriate prompts on the *System properties* window, press **[OK]** to create the connection definition.

Connecting to a system

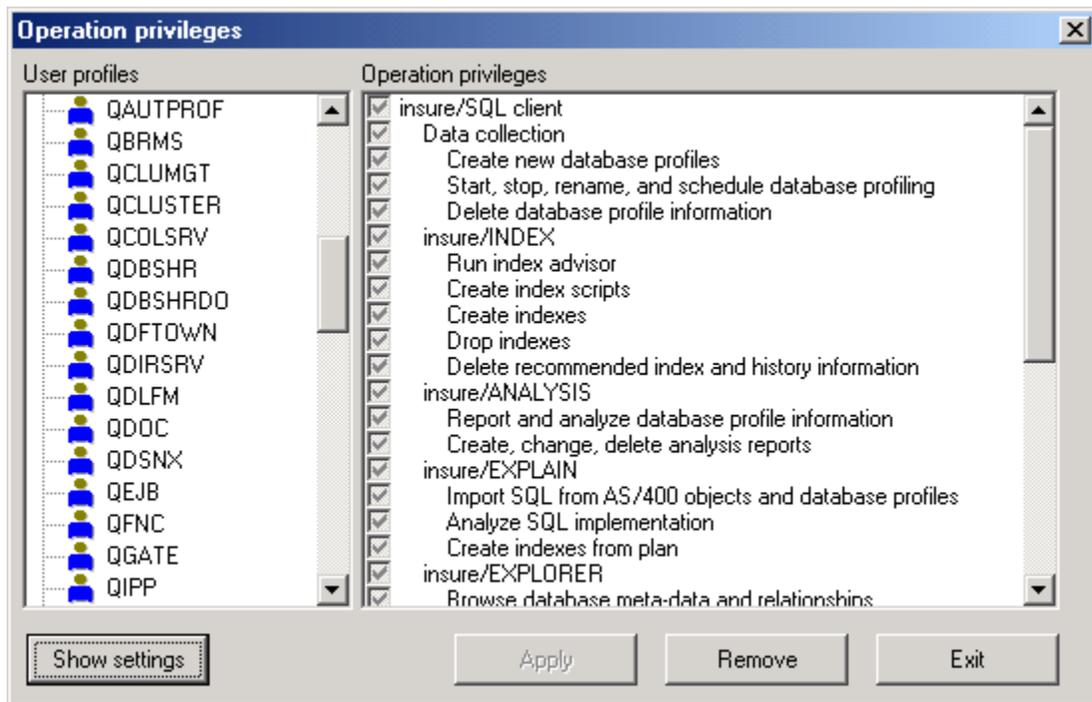
Select the system that you want to work with from the list provided in the *System i* window, and press the **[Connect]** button. Enter your user profile and password and press **[Connect]**.

5 Securing the use of HomeRun tools

HomeRun provides a broad suite of powerful functionality to the IT organization. Often, duties are split among various specialists. In this situation, it may be desirable to control what function in the toolset each specialist can use. HomeRun provides a set of granular controls to allow an IT administrator to determine who can and should use each part of the toolset.

To implement security settings for a user or group profile use the following procedure:

1. In any of the HomeRun tools, select Tools | Privileges.
2. The next dialog has a list of users and groups on the left side and an itemized list of product features on the right as seen below:



3. To quickly restrict usage to a few users, select the *PUBLIC user profile and unclick the top-most box. At the same time, you should make sure one user profile has the capability to update privileges. To do that, pick one user profile and make sure *Administration* and *Edit HomeRun privileges* are checked. If you do not do this step, only the QSECOFR profile will still be able to edit privileges.
4. To change the settings for a particular user, click on their profile and push the “Show settings” button. On the right you will then see the parts of the product that profile is

authorized to use. If the box is gray, the user does not have explicit authority defined and will get authority from either their group profile or global settings (the authority set for *PUBLIC).

5. To restrict a user from a particular feature, simply uncheck the box in front of that feature and click the “Apply” button. If the user attempts to use that function, they will be given a message saying they are not authorized to that feature and that they should contact their system administrator.
6. To remove settings, choose a profile (or set of profiles with multi-select) and click “Remove settings”. This will result in all settings being picked up from the group profile or *PUBLIC.

NOTE: When settings are changed for a user, they will not take effect until the user connects to that System i again.

6 System-wide installation impacts

HomeRun changes some settings on your System i system at installation time that can affect your current system configuration and activity. The HomeRun modifications that may have system-wide impacts are limited to:

- Changing system values
- Ending currently active servers, jobs, and monitors
- Configuring network attributes
- Modifying subsystem configurations
- Adding exit points

This section also details information on HomeRun's use of the following System i features:

- TCP/IP usage
- Job scheduler usage
- Authorities on installed libraries
- CL Commands and APIs used
- Programs which adopt authority

6.1 System Values

The HomeRun toolset helps you handle issues like performance, security, and usage tracking that require special system privileges to address. Because the product installs software that performs privileged operations, it requires certain system values that control authority and application privileges to be set to certain values. The following table shows the list of system values and a description of the HomeRun installation requirements.

QALWUSRDMN	This system value is checked at installation to ensure that the value is either *ALL or that it contains the program library as one of the libraries that allows user domain objects. HomeRun requires this setting because it stores and directly accesses user space objects in the program library. If the system value is not set properly for HomeRun, the installation support modifies the setting to include the program library.
QALWOBJRST	This system value is checked at installation to ensure that the value is either *ALL, or that it at least allows system state objects (*ALWSYSSTT) and objects that adopt owner authority (*ALWPGMADP) to be restored. HomeRun requires this setting because it restores objects with these attributes into the program and data library. If the system value is not set properly for HomeRun, the installation will fail.

QUSEADPAUT	This system value is checked at installation time to ensure that the system does not restrict the list of user profiles that are allowed to modify programs to use adopted authority. HomeRun requires this because depending on the system program temporary fix (PTF) level, this system value can also control users that are allowed to run programs that adopt *OWNER authority. If the system value is not set properly for HomeRun, the installation will fail.
------------	--

HomeRun references several other system values at run time to determine information about your system configuration. The following are other system values that are referenced at run time:

- QACGLVL
- QDATE
- QDAY
- QYEAR
- QMONTH
- QSRLNBR

6.2 Servers, Jobs, and Monitors

You need to ensure that the objects that will be replaced by the HomeRun installation and the resources that are being modified by the installation are not used or locked by other jobs on the system prior to starting the product installation. HomeRun creates and replaces objects in the program and data libraries. You should ensure that there are no objects locked in these libraries prior to installing the software. However, even if you do not check these libraries before you start the installation, the HomeRun installation checks that some of the common jobs that can hold critical locks or cause other problems are always ended before letting the installation continue.

6.3 Database Monitor and HomeRun

Several features within HomeRun build on top of the System i database monitor support. The HomeRun installation ends the database monitor if it is actively collecting system-wide activity. It ends the monitor to help ensure that there are no locks on files within the data library.

6.4 Subsystems and Work Management

The HomeRun server software handles:

- Managing and processing incoming requests from the administrative console software
- Enforcing user access policies configured by the administrative console software
- Scheduling of any activity requested by the administrative console
- Maintaining data collection information

The HomeRun server uses its own work management configuration to control how HomeRun client jobs are started. At installation time or using the HomeRun **CFGSVR** System i command located in our *{program library}*, you define the subsystem that HomeRun activity should run in. The default subsystem is XCSBS70 and is included in the server library. **If you use the default subsystem you can skip the rest of this section.** The subsystem that you specify will be modified to have additional job queue and routing entries for HomeRun.

For information purposes, we'll describe what changes are made by **CFGSVR** command in the following paragraphs.

The job queue is used as the starting point for starting new HomeRun client jobs. The job queue entry that is added is for the XCTCP job queue that is found in the program library. If you are changing an existing configuration or installing over a previous version of an HomeRun server, the existing job queue entry is first removed and then the new entry is added to the specified subsystem. The command that HomeRun uses to add the job queue entry is similar to the following. The default subsystem is QSERVER, and the sequence number begins at 50. If 50 is not available, the number is automatically incremented by the HomeRun configuration support until an unused sequence number is found.

```
ADDJOBQE SBSD(QSYS/QSERVER) JOBQ({program library}/XCTCP)
MAXACT(*NOMAX) SEQNBR(50)
```

The routing entry that HomeRun installs controls the routing of the HomeRun client jobs. It must be added to the same subsystem that has the XCTCP job queue entry. The routing entry uses the XCTCP routing data for comparison and calls the QCMD program. The XCTCP job class is specified as the job class for the routing entry. The command that HomeRun uses to add the routing entry is similar to the following. The default subsystem is QSERVER, and the sequence number begins at 170. If 170 is not available, the number is automatically incremented by the HomeRun configuration support until an unused sequence number is found.

```
ADDRTGE SBSD(QSYS/QSERVER) SEQNBR(170) CMPVAL('XCCMD***')
PGM(QSYS/QCMD) CLS({program library}/XCTCP)
```

Replaces *** with current version numbering (i.e. 050).

Routing entries are also added for the background helper job and the cleanup job. These can be seen by looking at the subsystem description.

If you are changing an existing configuration or installing over a previous version of HomeRun, the existing routing entry is not removed. It should not cause any harm to your existing application environment to leave it installed in a subsystem that is no longer

used by HomeRun. If you want to remove it, you need to remove it using standard work management support available on the System i. Before issuing the RMVRTGE command, you need to make sure that the sequence number used on the remove routing entry command is the sequence number for the HomeRun routing entry. You can check the routing entries by using the WRKSBSD command and displaying the routing entries for the subsystem that you want to change. For more information about performing work management activities, see System i work management documentation.

RMVRTGE SBSD(QSYS/QSERVER) SEQNBR(170)

The HomeRun installation creates objects within the program library to support these and other work management changes on your system. The following are objects that are created by the HomeRun installation support that can be used for work management control.

Object Name	Object Type	Description
XCSBS70	Subsystem description	Default subsystem used by the Centerfield server.
XCTCP	Job description	Job description used to set job properties for HomeRun administration client jobs
XCTCP	Job class	Job class used to set job properties for HomeRun administration client jobs
XCTCPBJ	Job class	Job class used by background jobs that should run at lower priority than interactive work.
XCTCP	Job queue	Job queue used to start HomeRun administration client jobs
XCSCRUBBER	Job description	Job description used to set job properties for the HomeRun Collection Scrubber job
XCHLP	Job description	Job description used for upcoming product enhancements
XCENTER	Output queue	Output queue used for installation joblog and debug

You can modify the objects used for controlling work management, but your changes will not be preserved when you upgrade to the next version of HomeRun.

6.5 Exit points

The following exit point is added during HomeRun product installation:

Exit Point	HomeRun Data Queue Name
QIBM_QWT_JOBNOTIFY	XCDTAQ



This exit point is used by the Usage Tracker for insure/INDEX and insure/ANALYSIS. At installation time, no jobs are ended and no subsystems are ended. However, if you want to have the Usage Tracker monitor for specific new jobs that start (that is, if you choose the *Monitor jobs by criteria you specify* Profile type), you will need to end and restart any subsystems in which those jobs might start before your monitor will take affect. This only needs to be done once after the installation of HomeRun.

6.6 TCP/IP Usage

The HomeRun server uses TCP/IP to communicate with the HomeRun clients. The server and client applications communicate almost exclusively using a TCP application. The application is written to use proprietary application data flows to give fast and efficient performance.

The System i and personal computer sockets applications communicate with each other through TCP ports. Ports are used by the TCP protocol to identify a unique origin or destination of communication with a TCP application. TCP ports can be any numeric value from 1 to 65535. TCP applications that are commonly used, like ftp and telnet, use pre-assigned port numbers. Pre-assigned port numbers are called well-known TCP ports. The well-known TCP port numbers range between 1 and 1023 and should not be used when you configure HomeRun. If you specify one of these ports, it can affect the operation of the application that normally uses the well-known port. When you install HomeRun, a port and associated application service is configured. The service name for HomeRun is CENTERFIELD_SERVER_VM (where VM is the version and modification level for the current installation). The port number used will vary by release. If the default port is already used by another application, the port number is incremented until a free port is found. The command that HomeRun uses to add the service and port configuration is similar to the following. You can check the port and service configuration after you install by using the WRKSRVTBLE command and locating the CENTERFIELD_SERVER_VM in the service list.

```
ADDSRVTBLE SERVICE(CENTERFIELD_SERVER_VM) PORT({default port})  
PROTOCOL('tcp') TEXT('Centerfield Technology Server')
```

In addition to the proprietary communications method, HomeRun uses an ODBC connection to handle report requests made by the administration client. HomeRun requires an IBM ODBC driver connection. When the HomeRun client is installed, the auto-configuration support will attempt to configure an ODBC data source if the ODBC driver can be detected.

6.7 Job Scheduler Usage

The System i built-in job scheduler is used by several components of HomeRun. Events that can cause jobs to be placed on the job scheduler are:

-
- Scheduling a Usage Tracker data collection
 - Scheduling Index Create requests using insure/INDEX or Visual SQL Explain
 - Cleaning database collections using the Collection Scrubber
 - AutoDBA analysis and execution jobs as well as user scheduled actions



7 Troubleshooting

This section provides answers to some frequent questions and problems that may arise after completing an installation.

The server installation did not complete successfully. What should I do?

Collect the following information to send to Technical Support:

1. Library list information: check your library list by running the command DSPLIBL in the same session in which the installation ran.
2. Joblog: ensure that a joblog is created by signing off of your session with the SIGNOFF LOG(*LIST) option.
3. OS/400 Version and PTF level.

If installation ran to completion but you received an error code at the end, copy of the installation joblog should exist in *{program library}/XCENTER* output queue.

The client installation did not complete successfully. What should I do?

Collect the following information to send to Technical Support:

1. Windows Operating System and Service Pack level
2. Authority of user who ran the installation
3. INSTALL.LOG file from the Program Files\Centerfield directory.

Both the client and server installed successfully. However, when I try to connect I get the message “Server not active on the system or the port specified.”

1. Ensure that the server is running by using the commands:

```
ADDLIBLE {program library}
STRSVR
```

If this step does not resolve the issue, continue with step 2.

2. The installation uses TCP/IP port number **{default port}** by default. If that port is in use, the installation will incrementally search for unused port numbers starting at **{default port}** and continue looking until one is found. To determine the port that was chosen use the following command:

```
WRKSRVTBLE SERVICE(CENTERFIELD_SERVER_VM)
```

If you find that a port other than **{default port}** is being used, you need to reconfigure your client to connect to that port. In the client product, when you are prompted to choose a System i to connect to, highlight the name of your System i and click the Properties button. Change the port number on this screen.

I have set up policies in insure/MONITOR (or insure/SECURITY or insure/RESOURCES) but they are not taking effect.

For insure/MONITOR and insure/SECURITY, you need to run the command ADDMON on your System i.

For insure/RESOURCES, you need to either run the command ADDQCEXIT, or from the client choose Install Policy Manager from the Configuration menu.

I have set up collection profiles to monitor jobs by specified criteria. But when those jobs start, no data is collected.

1. You need to restart any subsystems which might contain the jobs for which you specified criteria.

The HomeRun server installation specifies a data queue for the IBM exit point QIBM_QWT_JOBNOTIFY. IBM has designed this job notification support to work *after* any subsystems in which a job might start have been ended and restarted.

2. Make sure that the XCHELPER job is running in the subsystem you specified when installing the HomeRun server. If it is not, start it with the command STRHLPJOB.

Some of my insure/INDEX or insure/ANALYSIS menu options are grayed out in the client software.

Menu options are only activated for the products to which you are licensed.

I receive a message saying my license has expired.

Contact Centerfield support or your sales representative.

8 Support Contact Information

Centerfield Technology Inc. is committed to providing our customers with support as problems or questions arise. Support includes minor enhancement releases and upgrades which might be necessary as OS/400 and i5/OS releases become available.

8.1 Contact Information

Internet

Web support pages are maintained at <http://www.centerfieldtechnology.com/>. Updated documentation, how-to's, FAQs, and a list of known problems will become available as needed.

E-mail

To contact technical support by email, send email requests to support@centerfieldtechnology.com.

Fax

To contact technical support by fax, send your request to (507) 536-0474.

Phone

You can call 507-287-8119 for technical support. Telephone support is available from 8:00 AM to 6:00 PM CST.

8.2 Additional Information

- Visit Centerfield Technology's HomeRun web site (www.centerfieldtechnology.com) to find the latest software patches for HomeRun. Follow the support link from the home page.

PTFs listed in this document are current as of the date this document was released.

There are times where IBM releases PTFs applicable to the functions our software uses after the document release date. Accordingly, we strongly recommend you visit our website periodically and verify that all listed PTFs are applied on your system.

9 Appendix

In this appendix you will find helpful CLLE scripts as sample to do cut down on time needed to perform some of the installation operations.

9.1 Recycle host servers sample CLLE script

This is a sample script to recycle host servers that ADDMON command registers exit point programs for. Note that this may not be all inclusive list as some servers are more resilient than others (i.e. QTVDEVICE telnet server jobs).

CAUTION: Performing these actions will end any active server jobs, thus it is recommended to do this off hours.

NOTE:

Regular IPL or bringing system to restricted state would have the same effect (ENDSBS *ALL) as this script and would in fact ensure that all host servers are aware of the newly registered exit point programs (added via ADDMON command).

You can compile this source using CRTBNDCL command.

PGM

```
ENDTCPSVR *FTP          /* ends all active FTP connections */
STRTCPSVR *FTP          /* restart FTP server */
ENDTCPSVR *REXEC       /* ends REXEC connections */
STRTCPSVR *REXEC       /* restarts REXEC server */
ENDTCPSVR *NETSVR      /* if using file server, this ends it */
ENDHOSTSVR *ALL        /* end all host servers (ODBC, client access etc.) */
ENDPJ SBS(QUSRWRK) PGM(QSYS/QZDASOINIT) /* ends active ODBC prestart
jobs */
ENDPJ SBS(QUSRWRK) PGM(QSYS/QZDASSINIT) /* same as above, depending on
setup */
ENDPJ SBS(QUSRWRK) PGM(QSYS/QZRCSRVS) /* ends active net server prestarts
*/
ENDPJ SBS(QUSRWRK) PGM(QZSCSRVS) /* ENDS CLIENT ACCESS
LICENSE MGR PJ */
endpj sbs(qusrwrk) pgm(QZRCSRVS) /* ENDS REMOTE COMMAND PJs */
endpj sbs(qusrwrk) pgm(QZSOSIGN) /* ENDS Sign On PJs */
ENDPJ SBS(QUSRWRK) PGM(QSYS/QNPSESVS) /* ENDS ACTIVE NET PRINT
JOBS */
```

```
ENDSBS SBS(QSERVER) OPTION(*IMMED) /* needed for file server exit point
program only */
DLYJOB 60 /* wait some?? time period for QSERVER to end */
STRSBS QSYS/QSERVER /* restart QSERVER */
STRHOSTSVR *ALL /* restart all host servers */
STRTCPSVR *NETSVR /* restart file server */
/* reminder to restart Centerfield server if bringing down QSERVER */
SNDPGMMSG MSGID(CPF9898) MSGF(QCPFMSG) MSGDTA('IF YOU +
NEED CENTERFIELD SERVER UP, THEN EXECUTE +
STRSVR COMMAND NOW, AS IT WENT +
DOWN WHEN QSERVER WENT DOWN') +
TOPGMQ(*EXT) MSGTYPE(*COMP)

ENDPGM
```

To ensure that there are no locks remaining on any of the objects in the data library after you run the above script, you can perform following commands:

```
WRKOBJLCK {data library}/XCMONJRN
WRKOBJLCK {data library}/XCMONOP
WRKOBJLCK {data library}/XCMONCON
WRKOBJLCK {data library}/XCOPTXT
```

These files are used frequently by the exit point programs and are likely candidates for any remaining locks. To remove any locks on these objects, either recycle the server in question (if not done already) or directly end the prestart or batch immediate server jobs holding the lock.