

Hot Standby With VERITAS

For Prinergy Systems
Version 3.0 or Later

User Guide
English

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Who Should Use This Guide

This guide is intended for anyone who uses or administers a Kodak® Prinergy® system that uses the Hot Standby failover software tool and *VERITAS* Storage Replicator (VSR) software. It explains how to prepare the system for a failover, how to run the system in failover mode, and how to revert to normal operations. This guide assumes that you are a qualified and experienced Prinergy system administrator, and it describes only those procedures that are specific to failover operations.

In this revision, the following changes were made to this guide, in addition to minor edits throughout:

- Details that are specific to optional software were added or updated.
- The failover and failback procedures were broken into subprocedures denoted by alphabetic letters, to help ensure that the correct sequence is followed.
- A separate chapter was created for running a failover test.

To use this guide, you should:

- Have a working knowledge of Prinergy prepress operations
- Be familiar with the Microsoft® Windows® operating system
- Be familiar with and have the appropriate Administrator logon accounts for the system and the following related and optional software (if used):
  - Prinergy system
  - VSR software
  - Optional Kodak Link software, if used (This guide uses the term *Link* to refer to Link, Synapse Link, Prinergy Business Link, or Prinergy Production Reporting software.)
  - Optional Kodak InSite™ software, if used. Minimum supported versions for Prinergy Hot Standby configurations are InSite 4.5.0.2067 software and InSite PrePress Portal 5.0.4 systems. Older versions require an upgrade. (This guide uses the term *InSite* to refer to InSite, InSite Prepress Portal, or InSite Storefront software.)

Note: You can generally log on to a Prinergy or Prepress Portal server with administrator privileges using `ARAXI/ARAXI` (user/password). For an InSite Prepress Portal/Storefront server in a DMZ, you can log on using the InSite service logon account. If you do not know the password, contact a Kodak service representative.

This guide assumes that:

- All components of the Prinergy Hot Standby and VSR software are installed, configured, and tested on your system.
- All components required to run optional Link or InSite software in a Prinergy Hot Standby with VSR configuration are installed, configured, and tested on your system.

For More Information

- A quick-reference version of this guide is also shipped with the software. Keep a copy of the *Hot Standby with Double-Take* Quick Reference Card beside the primary server, so that the instructions will be available when you need them.
- Visit http://www.graphics.kodak.com/ for documentation, training courses, downloads, and service and support contacts.
- For self-support knowledgebase information, log on to the Kodak eCentral® Internet portal at https://ecentral.creo.com/.
- For system setup instructions, see the *Prinergy System Administration Guide* or the *Prinergy Administrator Help*
- For more information about optional Kodak software, see the corresponding system administration guides and user documentation. Basic procedures that you need to know are provided in this guide in Chapter 4, *Preparing for a Hot Standby Failover*.
- Additional technical information specific to the database replication software is available in the VSR documentation from VERITAS.

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About Hot Standby and Job Replication Failovers

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What Is Hot Standby?

Prinergy Hot Standby is a software-based solution that provides near-complete system redundancy, allowing Prinergy systems to continue to process jobs and produce plates if the primary server fails.

The Hot Standby solution is based on a failover mode in which a secondary server that is configured as a Hot Standby server assumes the role of primary server after a primary server failure, until the original primary server is restored. The Hot Standby solution retains full access to any job that is not stored on the primary server, and, if the system is also running Kodak Link software, it also retains full access to its production reports.

The reconfiguration required to switch the Prinergy system to and from Hot Standby failover mode is very straightforward, so your system can be running again within minutes of a primary server failure being detected.

Note: Before Link software support was added, Prinergy Hot Standby was known as "EPM+", which was built on the original Emergency Platemaking software (EPM). Learning to use Hot Standby will be relatively easy if you previously worked with EPM.

How Does Hot Standby Work?

To support Hot Standby, all of the primary server's Prinergy software components are installed onto a secondary server (or render station) that is also configured as a Hot Standby server. These components include all of the Prinergy executables, libraries, and configuration files, as well as an installation of the Oracle® database.

During normal operations, Prinergy files are copied to the Hot Standby server:

Separate processes are used to copy files from the Prinergy primary server to the Hot Standby server:

- Production data is replicated continuously in real time.
- Configuration files are copied once daily.

The Oracle database and—if Link is used—the Link database are continuously replicated in real time to the Hot Standby server, and the data is fully available when the system is put into Hot Standby failover mode. (The information in this guide is specific to a system that uses VSR software for database replication.)

Any configuration details from the primary server that the Hot Standby server will need in failover mode are also copied once a day to the Hot Standby server, so that it can act effectively as a primary server. These files include process templates, the Prinergy license key, and standard colors and fonts. If Link is used, customer and process mapping files are copied as well.

During normal operations, the Hot Standby server acts as a regular secondary:

During normal system operation, the Hot Standby server uses only the Prinergy components that are needed by a regular secondary server. All other nonsecondary components, such as the Oracle database, are unused.

When failover occurs, the Hot Standby server takes over as primary:

When the Prinergy primary server fails, you instruct the Hot Standby server to go into failover mode, and it then resumes the processing of jobs, at a slightly reduced capacity. If a Prepress Portal server is connected to the Prinergy primary server, you can also redirect it to the Hot Standby server after switching to failover mode.

When Should a Failover be Initiated?

Although the decision to initiate a Hot Standby failover depends on the circumstances, the main reason is to ensure that jobs continue to move through production. When a primary server failure occurs, you typically:

1. Call a service representative for help.
2. Assess the urgency of the situation. For example, if the primary server fails and a plate must be remade for a job on the press, you will likely switch the system to Hot Standby failover mode immediately.

It is also a good idea to initiate a failover for periodic testing of the Hot Standby system. See the next chapter, *Running a Failover Test*.

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Overview

Periodically simulating a failover will help you know what to expect and will assure you that the system will continue to function properly.

To test primary server operations in a failover, you stop the Prinergy system, set the Hot Standby server to run in primary mode, edit any settings needed to run a test job, run and verify a job, and then return to regular operations.

The steps in this section summarize the procedures that are described in greater detail in the remainder of this guide.

Important: Due to the urgency with which you might require Hot Standby functionality, we strongly advise performing the following steps as a quarterly "fire-drill" test. It will take about 30 minutes, depending on the database size.

The first time will require more time, because you will need to configure the Hot Standby server to match the primary server's configuration. If you are using Link software, then you will also use the failover test procedure to set up the Administration Client on the Hot Standby server. See *Configuring Link for Failover* on page 17.

Backing Up the Database Before You Start



WARNING: Database corruption can result if the failback procedure is not followed correctly when you later restore normal operations after running a test.

For planned failovers, it is highly recommended that before you switch to failover mode, you have a current Oracle database backup on tape and do a cold database backup, as follows.

To perform a cold database backup:

1. Stop Oracle services.
2. Copy the following database folders to your backup location.

   For Prinergy 3.x or earlier, back up these folders:

   - **E:\ORANT**
   - **[DataDrive]:\ORANT**

   For Prinergy 4.x, back up these folders:

   - **[SystemDrive]:\Oracle\OraData**
     or
     E:\Oracle\OraData
   - **[DataDrive]:\Oracle**

Testing a Prinergy Server Failover

This document assumes that you are familiar with regular Prinergy system administration tasks, such as starting and stopping the servers. If you are also using Link or InSite servers and are not as familiar with their administration, see:

- *Preparing the Link Software, if Used* on page 17
- *Preparing the InSite System, if Used* on page 18

To test a failover from the primary server to the Hot Standby server:

Gather information

1. Gather the information that you require for configuring the Hot Standby server so that it will be able to take over as primary server, with access to up-to-date JTPs, process templates, mark sets, ICC profiles, fonts stored in nonstandard folders, and Link (if used) database folders and configurations.
   - This requires the most time for the first failover.
   - For subsequent failovers, you need information only about items that have changed since the last failover.

   See Chapter 4, *Preparing for a Hot Standby Failover*, starting on page 13.

Fail over to the Hot Standby server

2. Stop Prinergy and Link (if used), enable the Hot Standby server to take over as the primary server, and start Prinergy and Link in failover mode. See Chapter 5, *Switching to Hot Standby Failover Mode*, starting on page 21.
3. Configure or update the Prinergy and Link (if used) configurations as needed on the Hot Standby server, using the information from the first step. See page 25.
4. If InSite is used, redirect the InSite server to the Hot Standby server—see page 18.

Test the failover

5. From Prinergy Workshop, run a test job in this configuration. See page 25.
6. If InSite is used, verify that InSite data was successfully redirected.
7. If Link is used, verify that the Link database is available and that the Link reporting feature is functioning correctly.

Fail back to the original primary server

8. On the primary server, delete the **Prinergy-Database** replication job. See page 29.
9. Return the Hot Standby server to secondary mode, restore database files, start Prinergy and Link (if used), and start data replication. See Chapter 6, *Reverting to Normal Operations*, starting on page 27.

Note: To save time when you run a test, you might choose to skip database restoration. However, note that any changes or work done while you tested the system in failover mode will be discarded.

4 Preparing for a Hot Standby Failover

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Overview

After a service representative installs Hot Standby on your Prinergy system, you must perform a few tasks to ensure an easy transition to Hot Standby operation if the primary server fails or needs to be stopped.

This chapter briefly describes how to prepare the Prinergy and optional software configurations at the Hot Standby server. For optional software, this chapter also describes basic procedures that you will need to know. See:

- *Preparing Prinergy for a Hot Standby Failover* on page 14
- *Preparing the Link Software, if Used* on page 17
- *Preparing the InSite System, if Used* on page 18

Preparation tasks are summarized in this chapter and described in greater detail in the applicable system administration documentation.

Tip: Because many of these procedures require the Hot Standby server to be running in failover mode, a good time to prepare the system is while you test a Hot Standby failover—see Chapter 3, *Running a Failover Test*.

Preparing Prinergy for a Hot Standby Failover

Note: Before you start, you must ensure that you have a local user account for Prinergy Workshop on the Hot Standby server.

This section provides instructions and guidelines to help ensure that up-to-date Prinergy configurations are available on the Hot Standby server during a failover. It explains how to:

- Configure JTPs on the Hot Standby server to match the primary server JTP configurations, and redistribute any JTPs that are present only on the primary server. For details, see page 14.
- Edit the copied process templates with information that the Hot Standby server will need after a failover occurs, such as accessible file locations for mark sets and ICC profiles—see page 15.
- Ensure that any fonts stored in nonstandard locations on the primary server are also available on the Hot Standby server—see page 16.

Redistributing the JTPs

Before the Hot Standby server can operate in failover mode as the primary server, it requires a Prinergy JTP configuration that matches that of the primary server. However, the primary and Hot Standby server configurations are independent—the JTP and JTP pool configurations are not automatically replicated. You must prepare a Hot Standby server JTP configuration that matches the primary server closely enough so that it can resume production after a failover.

If you plan the JTP and JTP pool distribution ahead of time, you will be able to quickly configure and verify your preferred distribution of JTPs when you switch to Hot Standby failover mode.

Note the following points:

- JTPs must be redistributed on the Hot Standby server after the first failover, and the system must be in Hot Standby failover mode, such as during a failover test. See Chapter 3, *Running a Failover Test*.
- Hot Standby JTP redistribution needs to be done only once—the configuration is then retained through subsequent failovers. Any later changes must be manually configured at the Hot Standby server during failover mode.
- Be sure to identify any JTPs that are only on the primary server—you will need to add and redistribute these so that they are accessible to the Hot Standby server.
- You can avoid the need for updating JTPs to match the JTPs on the primary server by using JTP pools of the same names on both servers.

Options for redistributing redundant JTPs:

If there is enough JTP redundancy in the original configuration, not all JTPs that were running on the primary server will need to be replaced.

For example, if two normalizer JTPs are active in the original configuration—one on the primary server and one on a secondary server—you might decide that it is acceptable to run in Hot Standby failover mode with only one normalizer JTP on the secondary server.

However, if both of these JTPs are needed, you must create a new instance of the normalizer JTP on one of the active Prinergy servers and enable any newly-created JTP in its pool. For more information about JTPs, see the *Prinergy System Administration Guide*.

To prepare the JTP distribution for failover operations:

1. Carefully review the current JTP and JTP pool distribution on the primary server, Hot Standby server, and any other secondary and render station servers.
2. Determine and record which JTPs and JTP pool configurations need to be set up on the Hot Standby server so that they match the primary server configurations identically or at least adequately.
3. If you want to prepare the JTP configuration on the Hot Standby server in advance, you must first place the system into failover mode. See *A. Failing Over to the Hot Standby Server* on page 22.

   After you add and redistribute the JTPs, you can return to normal operations. See *Reverting to Normal Operations* on page 27.

Tip: You can use the *JTP and Pool Distribution Table* on page 34 to record any JTP information that you will need to configure for the Hot Standby server.

Preparing the Process Templates

During normal operations, process templates from the primary server are copied daily to the Hot Standby server. During failover mode, the Hot Standby server, which is now the Prinergy primary, uses these process templates.

Check whether any of the following items referenced in process templates are in an accessible location for the primary server but not for the Hot Standby server:

JTPs Edit any process template that requests a JTP on the primary server, so that it instead specifies a JTP or JTP pool that is accessible to the Hot Standby server.

Note: Process templates that reference JTP pools instead of JTPs generally require less updating after a failover.

Mark sets Mark sets are copied daily only from the standard location at **%AraxiHome%\CreoAraxi\data\MarkSets** to the identical location on the Hot Standby server.

If a process template refers to mark sets that are at a different location on the primary server, you must update the locations in the process template.

ICC profiles ICC profiles are copied daily from the standard location at **%AraxiHome%\CreoAraxi\data\ICC-Profiles** to the identical location on the Hot Standby server.

If the ICC profile parameters in a process template refer to profiles at a different location on the primary server, you must update the locations in the process template.

To prepare for the failover, you must ensure that all files can be accessed by the Hot Standby server. If you copy files to a different location, such as another server, you must record the new file locations so that you can later edit the process templates after a failover is initiated. At that time, you might also need to edit some process templates to capture changes that were made since they were last copied.

To prepare process templates for failover operations:

1. In advance, identify any files that are stored only on the original primary server or in nonstandard folders and that are referenced in process templates.
2. Place copies of these files in locations that will be accessible by the Hot Standby server if the primary server is down, and record the locations.
3. After a Hot Standby failover is initiated, you can edit the process templates to point to the new locations.

Tip: You can use the *Process Template Reference Table* on page 35 to record the files and locations that you will need to configure for process templates on the Hot Standby server.

Preparing Any Fonts in Nonstandard Locations

Fonts that are stored on the original primary server in a location other than **%AraxiHome%\CreoAraxi\data\Fonts** are not backed up daily to the Hot Standby server. You must also manually install such fonts and their license files on the Hot Standby server to make them available for jobs that will be processed from the Hot Standby server while it is in failover mode.

Preparing the Link Software, if Used

Note: The term *Link* in this guide refers to any version of Kodak Link, Synapse Link, Prinergy Business Link, or Prinergy Production Reporting software.

In a Prinergy Hot Standby configuration that also uses Link software, the Link software is installed on both the Prinergy primary server and the Hot Standby server. During normal operations, the Link server runs on the Prinergy primary server.

Link information that is replicated in real time from the primary server to the Hot Standby server includes the production reporting data, all files in the **JDFFiles** shared folder (if Business Link is used), and the data from the **Process Mapping** and **Customer Mapping** tabs of the Link Administration Client. However, the **Configuration** tab settings on the primary server are *not* replicated and must be manually configured on the Hot Standby server after a failover is initiated.

This section provides basic version-specific instructions for accessing the Link Administration Client software, starting and stopping the Link service, and locating the Link data folders.

Accessing the Administration Client

Note: The term *Administration Client* in this guide refers to the software that you use to configure and administer Link-based software.

To access the Link Administration Client:

Choose the path that applies to your version of Link software:

- **Start > Programs > SynapseLink > Link Administration**
- **Start > Programs > Kodak > Business Link > Business Link Administration**
- **Start > Programs > Kodak > Production Reporting > Production Reporting Administration**

Stopping or Starting Link Services

To start or stop the Link service:

Choose the path that applies to your version of Link software:

- **Start > Programs > SynapseLink > Start Server** (or **Stop**) **Server**
- **Start > Programs > Kodak > Business Link > Start** (or **Stop**) **Server**
- **Start > Programs > Kodak > Production Reporting > Start** (or **Stop**) **Server**

Configuring Link for Failover

You can optionally set the Link configuration settings ahead of time, but only when the Hot Standby server is running in failover mode as the primary server—it must not be running as a secondary server. You can do this as part of a periodic failover test—see Chapter 3, *Running a Failover Test*.

To record the configuration settings:

1. On the Prinergy primary server, open the Link Administration Client.
2. Use the *Link Administration Client Configuration Table* on page 36 to record any entries that you will need to recreate on the Hot Standby server.

To configure Link in advance on the Hot Standby server (optional):

1. Temporarily switch the system to failover mode. See *A. Failing Over to the Hot Standby Server* on page 22.
2. Set up the **Configuration** tab, using the data that you recorded on the *Link Administration Client Configuration Table* on page 36.
3. Return to standard operations. See Chapter 6, *Reverting to Normal Operations*, starting on page 27.

Preparing the InSite System, if Used

If an InSite Prepress Portal or InSite Storefront server is connected to the Prinergy primary server, you will need to know how to stop the InSite services and redirect the InSite Prepress Portal/Storefront server. The server must point to the Prinergy primary server during normal operations and to the Hot Standby server in a failover situation.

Additional preparation might be required if you also use InSite StoreFront system to ensure ongoing access to data. See page 19.

Stopping the InSite Services

To stop services on the InSite Prepress Portal server:

1. Select **Start > Programs > Administrative Tools > Services**.
2. Right-click **InSite** and select **Stop**.
3. In the same menu, right-click **World Wide Web Publishing** and select **Stop**.

Redirecting the InSite Server

To redirect the InSite Prepress Portal/Storefront server:

1. From the **Start** menu on the InSite server, select **Run**.
2. Type `ICU` and click **OK**.
3. Press ENTER to stop InSite.
4. In the InSite Configuration Utility that appears, click **Next** until the Prinergy Primary Server Information dialog box appears.

5. Type the **Primary Server Name** and **IP address** of the server to which you are redirecting Prepress Portal:
   - When failing over, specify the Hot Standby server.
   - When reverting to regular operations, specify the Prinergy primary server.
6. Click **Next** until the Configuration Summary window appears, and click **Apply**.
7. Click **Next** until the Diagnostics dialog box appears, and click **Close**.
8. Open a command line and enter the following commands:
   ```
   net start InSite
   exit
   ```
9. Restart Prinergy services, and verify that the InSite system is operating properly. Do *not* skip this step.

Ensuring that StoreFront Folders are Accessible

If InSite StoreFront is integrated with the Prinergy system, you must ensure that the Prinergy job volume that hosts the StoreFront folders is accessible to both the regular Prinergy primary and the Hot Standby servers at all times. If the **Products**, **Catalogs**, and **Orders** folders currently reside on either of these servers, then you must prepare new locations for these folders and edit their path settings, carefully following the instructions exactly as provided in this section.

To move the StoreFront folders to a different, accessible server, if necessary:

1. Move the existing **Products** and **Orders** directories to new folder locations that are not on the Prinergy primary or Hot Standby servers.
2. Do *not* move the existing **Catalogs** directory. Instead, create a new folder called **Catalogs** in a location that is not on the Prinergy primary or Hot Standby server.
3. On the Prepress Portal server, open the Administration's Edit Configuration Settings dialog box for StoreFront.
4. Edit the following paths to point to the new locations:
   - **Path to the StoreFront Products**
   - **Path to StoreFront Catalogs**
   - **Path to StoreFront Orders**

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Switching to Hot Standby Failover Mode

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Overview

Before the Prinergy system can start processing jobs in failover mode, you must fail over to the Hot Standby server by switching it to primary server mode, and check and update the preparations that you made (see the previous chapter). The new primary server needs to be selected from Prinergy Workshop. If used, the Link software and database files, as well as the InSite server must also be prepared.

Tip: These tasks will take less time if you plan in advance, as described in Chapter 4, *Preparing for a Hot Standby Failover*.

Follow the procedures in this chapter in correct sequence:

- *A. Failing Over to the Hot Standby Server* on page 22
- *B. Starting the Kodak Software on the Hot Standby Server* on page 23—If Link is used, you will also have to rename the Link data folders on the Hot Standby server.
- *C. Updating the Hot Standby Server Setup* on page 23—might include adding and redistributing JTPs on the server and updating process templates.
- *D. Selecting the New Primary Server From the Client* on page 25
- *E. Updating the Link Administration Client, If Used* on page 25



WARNING: After a failover, database corruption can result if the procedure is not followed correctly when you restore normal operations.

Before running a planned failover, it is highly recommended that you have a current Oracle database backup on tape, and do a cold database backup before you return the Hot Standby server to secondary mode.

For instructions, see page 10.

A. Failing Over to the Hot Standby Server

Important: Ensure that no jobs are running when you switch the Hot Standby server to primary server operation.

To switch the Hot Standby server from secondary to primary mode:

1. If this is a failover test, unplug the primary server's network cable.
2. Stop the Prinergy software on all servers: **Prinergy Administrator > File > Emergency Shutdown**.
3. If Link is used, stop the Link server on the original primary server. See page 17.
4. If InSite is used, stop the **InSite** and **World Wide Web Publishing** services. See page 18.
5. Move the Prinergy dongle to the Hot Standby server.
6. On the Hot Standby server, switch Prinergy to primary mode: **Prinergy Administrator > File > Switch To Primary**.

Note: If the Hot Standby failover server is a render station with a Kodak Print Console dongle, the Prinergy Administrator software might report that there is a dongle mismatch. This can happen if the Prinergy Administrator reads the Print Console dongle security code before it reads the Prinergy dongle code. If this happens, you need to swap the dongle positions so that the Prinergy dongle is read first.

To correct a Print Console dongle mismatch:

1. Remove the Print Console dongle.
2. Install the Prinergy dongle where the Print Console dongle used to be.
3. Restart the Prinergy Administrator software.
4. Install the Print Console dongle where the Prinergy dongle used to be.

B. Starting the Kodak Software on the Hot Standby Server

After preparing the Hot Standby for failover operations, you start the Kodak software that is needed for this server to run in primary mode.

To start the Hot Standby server software:

1. If Link is used, rename the following Link database folders on the Hot Standby server:

   Important: These folders must be renamed on the Hot Standby failover server, in this exact sequence.

   Note: If the files are locked and you are unable to rename a folder, wait a few minutes and then try again.

   In the <Link installation folder>**\data** folder:

   a. Rename the **db** folder to **db_orig**.

   b. Rename the **replicateddb** folder to **db**.

   In the <Link installation folder>**\yoho\server\default**folder:

   c. Rename the **data** folder to **data_orig**.

   d. Rename the **replicateddata** folder to **data**.
2. On the Hot Standby failover server, start the Prinergy software. All jobs should now be accessible.
3. If Link is used, start the Link server on the Hot Standby server. See page 17.
4. If InSite is used, redirect the InSite server to the Hot Standby server. See page 18.

C. Updating the Hot Standby Server Setup

The procedures in this section assume that you correctly completed the steps in *A. Failing Over to the Hot Standby Server* on page 22. The Hot Standby server is now the primary server, and all jobs are present.

If this is a planned failover, then you might already have performed many of the steps described in the following subsections, based on the steps in Chapter 4, *Preparing for a Hot Standby Failover*. However, it is a good idea to review these steps to ensure that the Hot Standby server is set up and ready to process jobs, and particularly to capture any changes that might have been made since the last replication.

Adding and Redistributing the Hot Standby Server JTPs

Before processing any jobs from the Hot Standby failover server, you need to review the JTP and JTP pool distribution on the Hot Standby server and other secondary and render station servers.

To add and redistribute JTPs and pools on the Hot Standby server:

1. Start the Prinergy software.
2. Carefully review and record the JTP distribution, and note any changes required—see *Redistributing the JTPs* on page 14.

   Note: You can use the *JTP and Pool Distribution Table* on page 34 to record any JTP information that you will need to configure on the Hot Standby server.
3. Add and redistribute JTPs as required.

   Note: This needs to be done only once. The JTPs that you set up now will be retained through subsequent failovers.

Updating the Process Templates

In addition to any steps that you took based on *Preparing the Process Templates* on page 15, you *might* need to edit some process templates on the Hot Standby server when a failover is initiated. Your edits must capture any recent changes and references to unavailable files, including:

- Changes made to process templates since the last daily backup
- References to JTPs (as opposed to pools) that are on the primary server
- Files, particularly mark sets and ICC profiles, that exist only on the primary server

To update the process templates on the Hot Standby server:

1. Identify any process templates changes since the last daily copy, and manually edit any process templates that need to be updated.
2. Identify any references to JTPs that are located only on the original primary server, and edit the process templates to replace them with references to generic pools or new versions of the JTPs that you created on the Hot Standby server.

3. Identify any explicit references to mark sets or ICC profiles that exist only on the original primary server, and edit the process templates to replace them with references to the new file locations.

   Note: You can use the *Process Template Reference Table* on page 35 to record the files and locations that you will need to configure for process templates on the Hot Standby server.

Copying Any Required Fonts

Fonts that are stored on the original primary server in a location other than **%AraxiHome%\CreoAraxi\data\Fonts** are not backed up daily to the Hot Standby server. You must also manually install such fonts and their license files on the Hot Standby server, if they are to be available for jobs that will be processed from the Hot Standby server while it is in failover mode.

D. Selecting the New Primary Server From the Client

The first time that you log on to a Prinergy Workshop client after the system is switched to Hot Standby failover mode, you must change the server selection if the primary server was used last at this workstation.

- Select the name of the Hot Standby failover server that is currently operating as the primary server.

If you do not use Link software, the Prinergy system is now ready to process jobs and make plates in Hot Standby failover mode. If Link is used, see the next section.

E. Updating the Link Administration Client, If Used

If Link is used and you followed the instructions in *Preparing the Link Software, if Used* on page 17, then the **Configuration** tab of the Link Administration Client on the Hot Standby server is already set up. The information on the **Process Mapping** and **Customer Mapping** tabs is current as of the last replication from the primary server.

Before editing any Link settings after the primary server fails, you must first place the Prinergy Hot Standby system into failover mode and start the Link software on the Hot Standby failover server. For example, you might need to edit configuration settings that changed on the primary server but are not yet updated on the Hot Standby server, or any process or customer mappings that changed on the primary server since the last replication.

Note: You can use the *Link Administration Client Configuration Table* on page 36 to record any entries that you will need to recreate on the Hot Standby server.

6

Reverting to Normal Operations

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Overview

After the original primary server is repaired, you can revert to using it as the primary server and switch the Hot Standby failover server back to secondary server status. The Prinergy system then resumes normal operations with Hot Standby protection again ready to use when needed, and with the original primary server and all secondary servers and render stations linked correctly.

This chapter explains how to:

- Switch the Hot Standby server back to secondary mode—see the next section.
- Restore the database files—see page 29.
- Start the software on the Prinergy primary server—see page 30.



WARNING: After a failover, database coruption can result if the procedure is not followed correctly when you restore normal operations.

Before running a planned failover, it is highly recommended that you have a current Oracle database backup on tape, and do a cold database backup before you return the Hot Standby server to secondary mode. See page 10.

A. Returning the Hot Standby Server to Secondary Mode

The first step in resuming regular operations is to delete the **Prinergy-Database** replication job on the primary server. Then all Prinergy and database activity is stopped so that you can cancel the Hot Standby server's role as the failover primary server and allow it to resume its secondary role.



WARNING: Never switch the Hot Standby server back to being a secondary server while the **Prinergy-Database** replication job is active. Doing so will corrupt the database.

To switch the Hot Standby server back to being a secondary server:

1. Unplug the primary server's network cable.
2. On the primary server, select **Start > Programs > Veritas Storage Replicator > Console**.
3. ***Critical step***: On the original primary server, delete the **Prinergy-Database** replication job from the VSR Console.
4. Stop the Prinergy software on all servers.
5. If Link is used, stop the Link server on the Hot Standby server.
6. Move the dongle back to the original primary server.

   Important: To prevent database corruption, ensure that you deleted the **Prinergy-Database** replication jobs as instructed above.

7. Plug in the primary server's network cable.
8. On the Hot Standby server, set its mode back to secondary: **Prinergy Administrator > File > Revert to Secondary**.

B. Restoring the Database Files

Next, you update the Oracle data files and—if used—the Link database on the original primary server (unless you choose to skip this step for a planned failover test). The Oracle software must be stopped while database files are being restored.

Note: To save time when you are conducting a test, you might choose to skip restoration of the Oracle data files, especially if the database is large. However, note that any work done while the system was in failover mode will be lost, including any work that is relevant to Link (if Link is used).

Use the following procedure only if you intend to restore the database files.

To restore Oracle files:

1. If Link is used, stop the Link server.
2. If InSite is used, stop the **InSite** and **World Wide Web Publishing** services.
3. On the primary server, run the **RestorePrinergy-Database** script. When prompted, enter the name of the Hot Standby server and confirm the restoration.

4. On the VSR Console's **Monitor** tab, monitor the restoration progress.

   Important: You *must* allow this process to finish. Interrupting a restoration will make the database unusable on the primary server.

   Note: If there is an unexpected interruption, such as a power outage, you can restart the restore process by running the **RestorePrinergy-Database** script again. The restore process will overwrite the unusable database on the primary server with the still-good copy on the Hot Standby server.

5. After the restoration is completed, delete the **Restore-Database job** from the VSR Console.

6. If Link is used, rename the following Link database folders:

   Important: These folders must be renamed on the *original primary* server, in this exact sequence:

   Note: If the files are locked and you are unable to rename a folder, wait a few minutes and then try again.

   In the **[Link installation folder]\data** folder**:**

   a. Rename the **db** folder to **db_orig**.

   b. Rename the **replicateddb** folder to **db**.

   In the **[Link installation folder]\yoho\server\default** folder:

   c. Rename the **data** folder to **data_orig**.

   d. Rename the **replicateddata** folder to **data**.

C. Starting the Kodak Software on the Primary Server

After restoring the database files, you start up the Oracle, Prinergy and—if Link is used—Link software on the primary server. If InSite software is used, you also redirect InSite data back to the primary server.

To start up the primary server software:

1. Start Oracle by running the **EnableOracle** script on the primary server, located in **[SystemDrive]:\Program Files\Veritas Storage Replicator\Creo\ Prinergy-Database**.

2. On the primary server, start Prinergy on all servers.

3. On the primary server, verify that Prinergy is operating correctly and that the most current jobs are intact. Do *not* skip this step.

4. If Link is used:

   a. Start the Link server on the primary server.

   b. Verify that Link is operating properly. Do *not* skip this step.

5. If InSite is used, use the ICU utility to stop InSite, redirect the Prepress Portal server to the Prinergy primary server, and restart InSite. See page 18.

D. Start Replication

The final step is to ensure that data is once again replicating correctly to the Hot Standby server. A database replication set needs to be created only once, unless it is deleted.

The Kodak Replication Monitor utility runs on the primary server and queries the status of the VSR replication job. This utility helps to prevent an old database from overwriting a current one.

If the status of a replication job changes to anything other than **Running** (normal operational status), a dialog box appears on the first ten servers in the Prinergy node list. The current status of the replication job is displayed, and a message advises you to check the primary server.

Replication Monitor starts whenever you log onto the primary server. The startup item is located in **Programs > Startup > Replication Monitor**.

To locate the VSR Console:

➢ Select **Start > Programs > Veritas Storage Replicator > Console**.

To create or recreate a VSR replication job:

1. In the VSR Console, select the **Monitor Jobs** tab.
2. Run the **Create&StartPrinergy-DatabaseJob.cmd** script, located in **Program Files\Veritas Storage Replicator\Creo\Prinergy-Database**.

This creates the replication set called **Prinergy-Database**. For Link, the following folders within the Link installation folder are part of the replication set:

- **\data\db**
- **\yoho\server\default\data**

The first time this connection is activated, it mirrors the complete contents of the replication set to the Hot Standby server. This can take a long time if the database is large, and it is also affected by network conditions.

To monitor replication progress:

➢ In the VSR Console, select the **Monitor Jobs** tab.

To ensure ongoing replication:

- Verify that VSR is actively replicating.
- Ensure that the Kodak Replication Monitor utility is kept running.
- Occasionally check the VSR Console **Monitor Alerts** tab for errors.

To view the replication sets that VSR replicates:

1. In the VSR Console **Configure Jobs** tab, double-click a replication job.
2. Browse the file tree. Do *not* modify the replication job.

A

Hot Standby Planning

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JTP and Pool Distribution Table

To make it easy to configure and verify your preferred distribution of JTPs on the Hot Standby server, use the following table to record the pools and JTPs that you will need for Hot Standby failover operation.

Pool or JTP	Name	Type	Server	Properties/Options
Example: Pool	Color Match	Color Match Pool	Primary	
Example: JTP	ColorMatchOnSecondary	Color Match JTP	Secondary	Color Management: Advanced

Process Template Reference Table

Use this table to record process templates that refer to a primary-server-specific JTP and to note the names and locations of any mark sets or ICC profiles that you will need for Hot Standby failover operation.

File Name or Process Template	New Location or JTP	Your Description
Example: `SpecialMarkFile.pdf`	`\\Secondary\MarkSets`	`Special mark set required for Customer A.`

Link Administration Client Configuration Table

If Link is used: Use this table to record any nondefault entries that are set and saved on the Administration Client **Configuration** tab that you will need for Hot Standby failover operation.

Link Configuration Tab Option	Your Configuration Setting
Link Administration Client pane	
Server Host Name	
Display Language	
Measurement Units	
Backup Connection pane	
Backup Storage Directory	
Backup Time (Hours:Minutes)	
Number of backups retained	
Notification Configuration pane	
E-mail Destination addresses	
E-mail Server Host Name	
E-mail User Name	
E-mail Account Password	
E-mail Subject Prefix	
System events notification frequency	
Job events notification frequency **Note:** Visible only with MIS connectivity.	
Prepress Workflow Connector pane **Note:** Visibility of options depends on whether MIS connectivity is licensed.	
Primary Server Name	
Job Volume	

Link Configuration Tab Option	Your Configuration Setting
Workshop Group	
Job Naming Format	
Default Job Template	
MIS Workflow Connector pane (if used)	
Activate MIS Connector	Yes ____ No ____
URL for JDF Connector	
Prepress Job Creation Strategy	❒ Category is PrePress and Type is ProcessGroup ❒ Per ProcessGroup with Prepress processes ❒ Single prepress job per MIS submission ❒ Product containing prepress processes
Enable manual completion after failure	Yes ____ No ____
Length of delay of QueueEntry return	_____ minutes
Link hot folder pane (if used)	
Activate hot folder	Yes ____ No ____
Base Directory for Link hot folder	**Inbox**
Subdirectory for incoming messages	
Delete processed messages after this many days	____ days
Delete error messages after this many days	____ days

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