

Prinergy

Workflow Software

Version 4.0

System Administration Guide

English

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Contents

1 System Overview 1

What Is Prinergy? 2
Prinergy Product Family 2
About the Architecture 3
PDF: The Internal File Format 3
Adobe Extreme Technology 3
Distributed, Client/Server Architecture 4
CORBA Communications Structure 5
About Jobs 6
About Server Software 7
Components of Prinergy Server Software 7
About Administrator 8
About Servers 9
Distributing Components Across Servers 10
Distributing JTPs Across Servers 10
Distributing Jobs Across Servers 10
Distributing Input Files Across Servers 10
About Workshop, the Client Software 12
Where Workshop Is Installed 12
Workshop and Java 12
Resources for Workshop 12

2 Starting and Stopping Prinergy 13

The Prinergy System 14
Starting the Prinergy System 14
Shutting Down the Prinergy System 15
Prinergy Server Software 15
Starting Prinergy Server 15
Stopping Prinergy Server 17

3 Configuring Prinergy 19

How to Configure Prinergy 20

4 Using the Archiver System 21

Main Tasks of the Archiver System 22
Archiving Job Data 22
Purging Job Data 22
Retrieving Job Data 22
Archiving vs. Backup: What's the Difference? 22
Archiver System Components 24
Microsoft Management Console 24
Removable Storage Manager (RSM) 25
Archive/Retrieve JTP 26
Disk Purge JTP 26
Archiver Daemon 26
Media Manager 26
About Removable Storage Devices 27
Individual Tape Drive 27
Tape Libraries 28

Using Multiple Removable Storage Devices 28
Using a Removable Storage Device for Archiving and Backup 28
About Archiving Media 30
Enabling the Archiver System 31
Overview of Using the Archiver System 32
Creating Copies of Your Archives 34
Developing an Archiving Strategy 36
Planning Which Jobs and How Often 36
Organizing Your Archives 36
Storing Media 37
Sample Archiving Scenarios 37
Overview of RSM 42
RSM Components 42
Starting RSM 42
About Media Pools 43
How RSM Identifies Media 43
System Pools 43
Application Pools 44
Managing Media Pools 46
Moving Media to the Free Pool 46
Creating an Application Pool 46
Archiving to Multiple Media Pools 47
Media Pool Commands Quick Reference Table 47
Handling Archiving Media 49
Labeling Media 49
Handling Media 50
Managing Archiving Media 51
Viewing Physical Locations 51
Managing Media in the Removable Storage Device 54
Monitoring Operator Requests 56
Where Do Operator Requests Appear? 56
Requests in RSM 56
Requests As Prompt Messages 56
Requests From Prinergy Workshop 56
Monitoring the System 57
Viewing Archive Information 58
Using the Media Manager 58
Cleaning a Removable Storage Device Drive 59
..... 59

5 Backing Up the Prinergy System 61

What Is Backup? 62
Why Is Backup Important? 62
Prinergy Backup Components 63
About Oracle Backup Manager Software 63
About Backup Software 63
About Removable Storage Devices 63
About Backup Media 64
About Microsoft Management Console 64
About Removable Storage Manager 64
Prinergy Backup Options 66
Developing a Backup Plan 67
Deciding Which Data to Back Up 67
Planning a Backup Schedule 68
Handling and Storing Media 69
Media Rotation Strategies 69
Using the Basic Backup Option 72

Configuring Basic Backup ... 72
Performing a Basic Backup ... 72
Using Prinergy Online Backup ... 74
Backing Up to a File on Disk ... 74
About Prinergy Online Backup ... 74
Configuring Prinergy Online Backup ... 74
Performing a Prinergy Online Backup ... 75
What to Do If Backup Fails ... 75
Using Oracle Backup Manager ... 77
Starting Oracle Backup Manager ... 77
Exiting Oracle Backup Manager ... 77
Oracle Backup Manager Backup Parameters ... 77
Viewing Backup Parameters ... 79
Editing Backup Parameters ... 81
Backing Up the Database on Request ... 81
Starting and Stopping the Oracle Backup Manager Scheduler ... 82
Viewing Backup History ... 82
Oracle Backup Manager Quick Reference Table ... 83

Glossary 85

Index 91

1 System Overview

What Is Prinergy? 2
About the Architecture 3
About Jobs 6
About Server Software 7
About Servers 9
Distributing Components Across Servers 10
About Workshop, the Client Software 12

What Is Prinergy?

The Kodak® Prinergy® workflow system is a PDF-based, printing workflow–management tool that organizes prepress and plate production. The Prinergy system manages tasks such as file optimization, trapping, color management, proofing, color matching, imposition, archiving, film-making, and plate-making for increased process control and productivity.

Prinergy is a scalable system, allowing you to use only the components that you need for your workflow. You can easily add functionality by enabling features.

Prinergy Product Family

The Prinergy product family includes:

- **Prinergy Connect™:** a full-featured Prinergy system for commercial and publications printers who need page processing, imposition, and film-making or platemaking.
- **Prinergy Direct™:** a Prinergy system that accepts imposed input, and outputs to a range of proofing and output devices. It offers a remote plating solution for multisite printers or an economical solution for printers who already have an imposition solution.
- **Prinergy Powerpack™:** a Prinergy system designed for offset, flexographic, and gravure packaging printers.
- **Prinergy Publish™:** a Prinergy system that is configured for page preparation. It converts input files into a production-ready format for use in a downstream platemaking workflow, often another Prinergy system.

Products that are related to the Prinergy family include:

- **Kodak InSite™:** a Web portal that lets you (the printer) and your customers (print buyers) work with print jobs over the Internet.
- **Kodak Link:** software that automates the exchange of production data between a prepress workflow system and a Management Information System (MIS).
- **Kodak Preps®:** imposition software for the commercial printing industry.

About the Architecture

This section explains some key concepts related to the architecture of Prinergy.

PDF: The Internal File Format

The internal file format in Prinergy is PDF. This means that all input files of all file types are converted, or "normalized," into PDF digital masters for use in subsequent phases of the workflow.

PDF files:

- RIP reliably and predictably

  Unlike Adobe® PostScript® files, PDF files do not have to be interpreted to ensure that all referenced resources, for example, fonts and images, are available. Thus, rasterizing—the second phase of RIPing that occurs just before output—is a straightforward and predictable process.

- Are independent of any platform, operating system, authoring software, and output device
- Are viewable in Microsoft® Windows®, Apple® Mac OS®, and UNIX® operating system software
- Are printable to output devices at high resolutions

Although Prinergy uses PDF internally, it uses many other file formats for input and output. For example:

- It accepts several file formats as input files, including PostScript, EPS (Encapsulated PostScript), and many others.
- It produces several file formats as output, including vector or raster formats.

For a list of supported file formats, see Prinergy Workshop Help.

Adobe Extreme Technology

Prinergy is based on Adobe Extreme® technology, a high-end, production-printing architecture that provides these important features:

- Support for PDF, the native format of Prinergy
- A communications structure for messaging and managing the Extreme system
- Support for Portable Job Ticket Format (PJTF)

Job Tickets

In Extreme technology, a job ticket is a collection of information relating to one task. It always includes an outline of processing steps that need to be performed. It may also include other information, such as the files to process, destinations, and so on.

Job tickets enable Prinergy to perform processing in the background without the need for user interaction.

Job tickets use the Portable Job Ticket Format (PJTF), a control mechanism for specifying the sequence of operations and parameters that are to be performed on PDF files.

A job ticket takes its name from the Extreme technology practice of equating a job with a task. Except for the term *job ticket*, Prinergy documentation uses the standard prepress definition for a job—a related collection of customer files—not a task.

Job Ticket Processors (JTPs)

A job ticket processor (JTP) is a software process that performs a specific step to help process a job ticket.

Prinergy has a JTP for each possible kind of processing—for example, refine, output, and archive JTPs. Some processes, such as refine, require several JTPs strung together. For a complete list of JTPs, see Prinergy Administrator Help.

You can have multiple instances of the same type of JTP running on a server. For example, with multiple instances of the Normalizer JTP, you can process multiple jobs simultaneously.

You can distribute some JTPs throughout the system by placing them on secondary servers. For information, see *Distributing JTPs Across Servers* on page 10.

In Prinergy, a job ticket includes a map that specifies which JTPs to use and in what order.

Distributed, Client/Server Architecture

Prinergy is a client/server system:

- The client software is Prinergy Workshop.

  See *About Workshop, the Client Software* on page 12.

- The server software is a set of components called Prinergy Server.

  Two key components are the client/server® database, which stores job status and history details, and Prinergy Administrator, which manages the system. See *About Server Software* on page 7.

Prinergy is also an expandable system with a built-in ability to distribute jobs and processing work across multiple servers. For information, see *Distributing Components Across Servers* on page 10.

How the Client and Server Interact

Each time that you perform an action on a job in Prinergy Workshop:

1. Workshop asks Prinergy Server to perform the action—for example, to normalize PostScript input files.
2. Prinergy Server creates a job ticket for the requested action.
3. For each step in the job ticket:
   a. Prinergy Server software sends the job ticket to the JTP on the appropriate server.
   b. The JTP performs the steps defined in the job ticket.
   c. The JTP reports back to Prinergy Server software.

4. When the action is complete, Prinergy Server software updates Workshop and the database to reflect the current status of the job and related files, including any new system files in the job folder.

CORBA Communications Structure

Prinergy uses Object Management Group, Inc.'s Common Object Request Broker Architecture (CORBA®) for some internal communications. CORBA allows software to communicate with one another, no matter where they are located or who designed them.

The Object Request Broker (ORB) is the middleware that brokers the communication between client and server software—for example, between Prinergy Workshop and the various Prinergy daemon processes on the server.

Prinergy uses an implementation of CORBA by IONA® Technology PLC called Orbacus® and OrbacusWeb. It uses TCP/IP as the core networking protocol.

Not all communication in Prinergy relies on CORBA. Adobe Extreme does not use CORBA and has its own communication structure. However, Extreme still uses TCP/IP as the underlying protocol.

About Jobs

In Prinergy, a job is the unit used to organize work. A job typically corresponds with all the components related to a single publication.

Every job has a "home server," which is the server where it is stored.

A Prinergy job has the following components:

Component	Description	Location
A job folder named after the job	Contains the files for a job, including the system files that Prinergy generates, such as master PDF files and thumbnails	In the **Jobs** folder on the job's home server
Input files	Customer files that contain the original information for a printing job, such as PostScript files or imposition plans	Either: • **UserDefinedFolders** folder in the job folder • Any computer that is visible from the job's home server, such as a file server
Database information	Information about a job, including the: • Location of all files • Status of job elements • History information	An Oracle database on the primary server

Note: Never modify job system files (in the **System** subfolder in the job folder). If you do, Prinergy may not be able to reference job components.

For more information about job folders, see Prinergy Workshop Help.

For information about where job components are stored, see *Distributing Jobs Across Servers* on page 10.

About Server Software

The server software side of a Prinergy system is called Prinergy Server.

Components of Prinergy Server Software

Prinergy Server software includes several components, which can be installed on multiple servers, as described in the following table:

Software	Purpose
Components on All Primary and Secondary Servers	
Prinergy Administrator **(UADM.exe)**	Acts as the user interface for Prinergy Server software For information about using Administrator, see Administrator Help.
JTPs (multiple)	Process PDF files and their contents—for example, trapping For a list of JTPs, see Administrator Help.
Daemons (multiple)	Execute processing that is unrelated to PDF files—for example, job ticket creation, job status and history, imposition, and input file registration For a list of daemons, see Administrator Help.
Araxi Service **(Araxi.exe)**	Launches core processes when the server starts For information about setting up Araxi Service, see Administrator Help.
Components on the Primary Server Only	
Oracle software **(**Oracle.exe) and database	Stores job information, including file attributes, history information, and pointers to input files—but doesn't store file content
Oracle Backup Manager	Backs up the system drive and database to tape or disk.
Prinergy Archiver	(Optional) Archives Prinergy jobs (includes archive-related JTPs and Windows RSM)
Prinergy Backup	(Optional) Backs up the database to disk

For a description of primary, secondary, and tertiary servers, see *About Servers* on page 9.

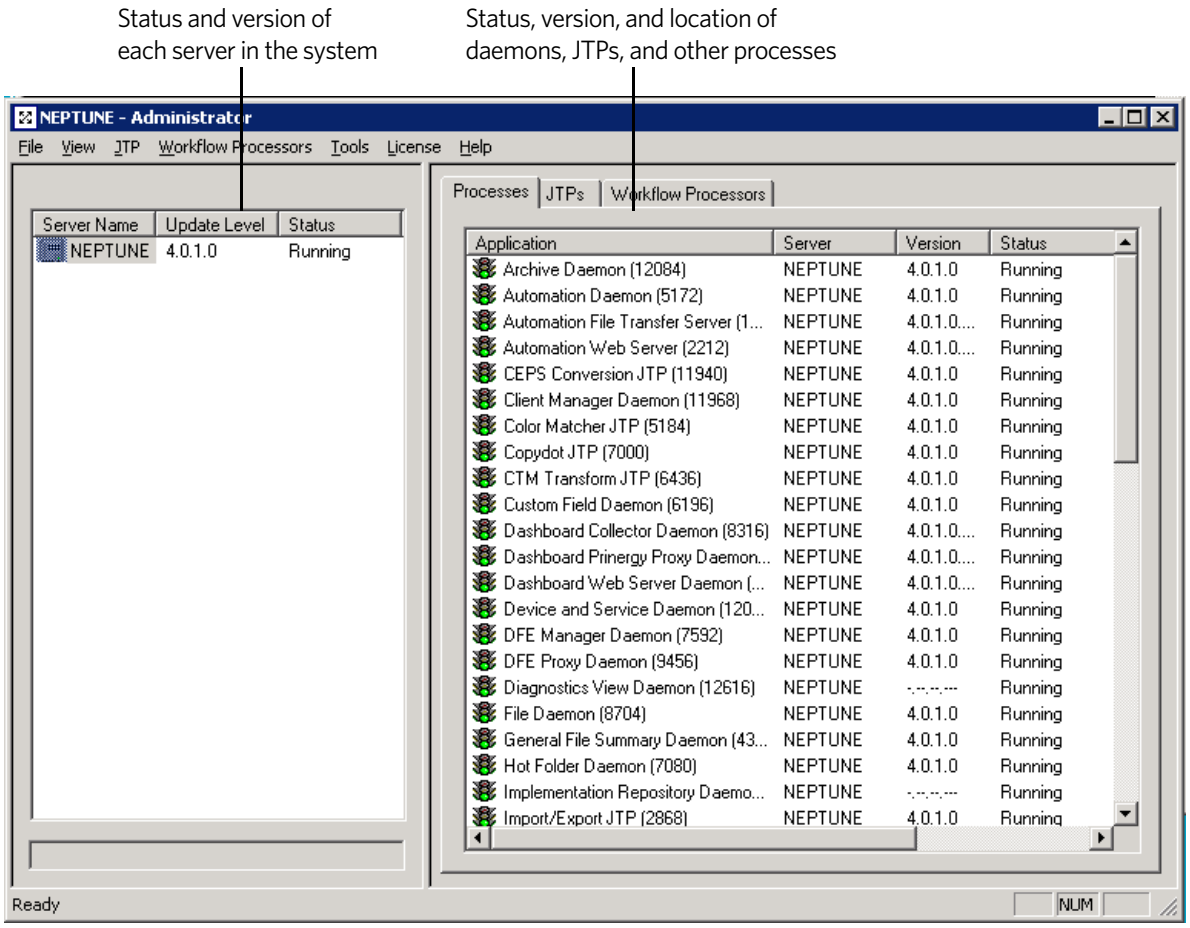
Some Prinergy servers also have companion software, such as Kodak Print Console or Kodak InSite.

Important: Never install unauthorized software on your Prinergy system.

About Administrator

Prinergy Administrator is where you control Prinergy Server software and the Prinergy system. Use Administrator to configure servers and JTPs, monitor the system, add new licenses, and so on. For examples of what you can do in Administrator, see Chapter 3, *Configuring Prinergy*.

For information about using Administrator, see Administrator Help.



About Servers

A Prinergy system includes the following servers:

- One primary server
- Any number of secondary, tertiary, or file servers

The following table describes each type of Prinergy server, identifying the software installed on it, the operating system requirements, and whether it stores jobs.

Type of Server	Description/Purpose	Server Software Installed	Operating System	Stores Jobs?
Primary server	Coordinates requests from Workshop and maintains the database	All server software, including the database	Windows 2000 Server or Windows 2003 Server	Yes
Secondary servers	Runs some or all JTPs to distribute processing For example, an archiving station runs archiving JTPs	Administrator One or more JTPs Some daemons	Windows 2000 Server or Windows 2003 Server	Yes
	Render station: A secondary server that runs high-resolution rendering software and is connected to an output device		Windows 2000 Server or Windows 2003 Server	No
Tertiary servers	Stores jobs. Does not perform processing.	None	Windows is recommended	Yes
File servers	Stores input files, does not perform processing, and is not called a Prinergy server	None	Any server that you can access	No

For more information about Prinergy Server software components, see *About Server Software* on page 7.

For information about configuring servers in the Prinergy system, see Administrator Help.

Distributing Components Across Servers

With multiple servers, you can distribute Prinergy components throughout your system to increase overall performance. Although Prinergy can work well as a single-server system, too much simultaneous demand can overwhelm any system.

Distributing JTPs Across Servers

You can distribute JTPs over multiple servers for optimal load sharing and increased throughput. To distribute JTPs, you can:

- Place different types of JTPs on different servers—for example, place archiving JTPs on one server and other types of JTPs on another server
- Place the same types of JTPs on multiple servers—for example, place the Normalizer JTP on two servers

The best JTPs to distribute onto secondary servers are CPU-intensive tasks, such as rendering final output.

Note: Some daemons also run on multiple servers, but are completely controlled by the Prinergy system. You cannot control which server daemons run on.

Distributing Jobs Across Servers

You can distribute jobs onto primary, secondary, or tertiary servers. (You cannot store jobs on file servers.)

The server where a job is stored is called the "job home."

It is best to distribute jobs only on secondary and tertiary servers, not on the primary server. By reserving the primary server for software, you increase performance on the primary server.

Distributing Input Files Across Servers

Input files can be stored on *any* server, including file servers. You are not forced to store them in the job folder on the job's home server.

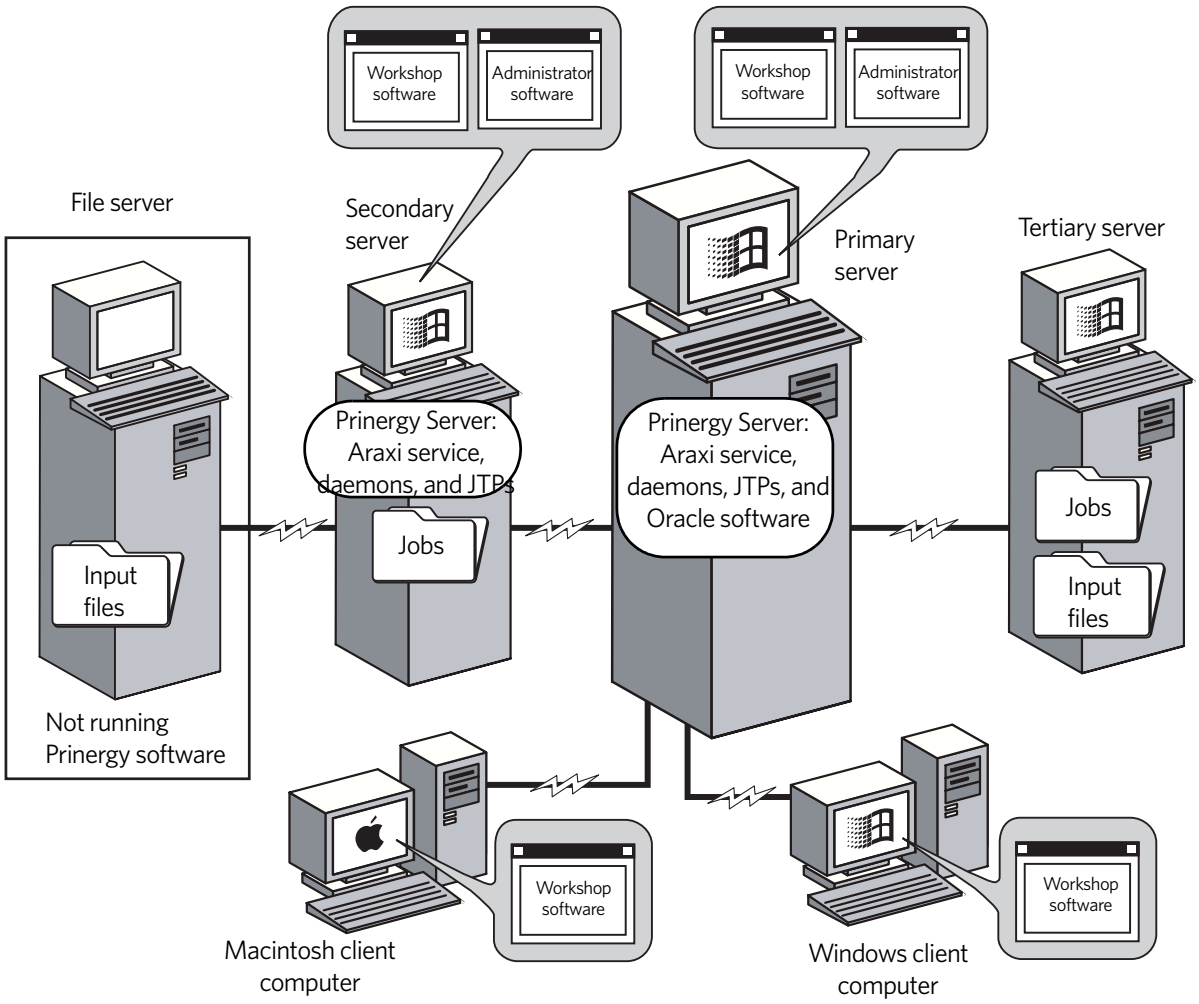


Figure 1: A sample Prinergy system

About Workshop, the Client Software

Prinergy Workshop is the main client software in a Prinergy system. It is the main way that you interact with the Prinergy system by creating jobs, triggering processes, and so on.

Where Workshop Is Installed

A version of Workshop is installed on:

- Each primary and secondary Prinergy server
- Any number of client computers

Even if your Prinergy system includes only one server, you should have at least one client computer to run Workshop.

Workshop and Java

Workshop software is primarily written in the Sun™ Java™ language, a platform-independent language that enables Workshop to run and look the same on both Mac OS and Windows operating systems.

Java software runs on top of a Java Virtual Machine (VM) that provides the interface between application software and the operating system. The VM for Mac OS is Apple Macintosh® Runtime for Java (MRJ), and the VM for Windows is Java Runtime Environment (JRE).

Resources for Workshop

For more information about Workshop, see these resources:

- *Prinergy Connect Quick Start Guide*, *Prinergy Powerpack Quick Start Guide*, or *Prinergy Direct Quick Start Guide*
- Prinergy Workshop Help
- *Prinergy Client Computer Installation Guide*

2

Starting and Stopping Prinergy

The Prinergy System 14
Prinergy Server Software 15

The Prinergy System

Following the proper procedures for starting and shutting down the system will help safeguard against equipment damage and data loss.

These procedures include:

- Starting the Prinergy system
- Shutting down the Prinergy system
- Starting Prinergy Server software using Prinergy Administrator
- Stopping Prinergy Server software using Prinergy Administrator

Starting the Prinergy System

Once the Prinergy system is started, it does not need to be shut down unless problems occur or maintenance work is required. Under normal operating conditions, the system remains on at all times.

Note: Use Prinergy Administrator to stop Prinergy Server software without shutting down the system. See Stopping Prinergy Server on page 17.

To start the Prinergy system:

1. Turn on the UPS (uninterruptible power supply).
2. If your system has an external RAID (Redundant Array of Independent Disks), turn it on and wait for the green light to come on. This can take several minutes.
3. Turn on all other peripheral devices. These can include:
   - Removable storage devices (for archiving and/or backup)
   - Proofing devices
   - Output devices
4. Turn on all servers, including: primary servers, secondary servers, render stations, tertiary servers, and file servers. Wait for the operating system to start on each computer.

   Important: Ensure that all servers are running and on the network before starting Prinergy on the primary server.
5. On the primary server, start Prinergy Administrator. From the **Start** menu, select **Programs > Prinergy > Prinergy Administrator**.
6. On the primary server, start Prinergy. From the **File** menu in Prinergy Administrator, select **Start Prinergy.**
7. Once Prinergy is running, turn on the client computers and monitors.

Shutting Down the Prinergy System

You usually do not need to shut down the system, unless problems occur or maintenance work is required. Under normal operating conditions, the system remains on at all times.

Note: Use Prinergy Administrator to stop Prinergy Server software without shutting down the system. See Stopping Prinergy Server on page 17.

To shut down the Prinergy system:

1. On each client computer, quit Prinergy Workshop, and then shut down the computer.
2. When prompted, turn off the power switch on each client computer.
3. On each secondary server, quit any Prinergy software that is running, and then shut down Windows.
4. Turn off the power switch on each secondary server computer.
5. On the primary server, quit any Prinergy software that is running, and then shut down Windows.
6. Turn off the power switch on the primary server.
7. Turn off the power switch on the RAID.
8. Turn off the power switch on the UPS.
9. Turn off any peripheral devices. These can include:
   - Removable storage devices (for archiving and/or backup)
   - Proofing devices
   - Output devices

Prinergy Server Software

Prinergy Server is the server software side of a Prinergy system. It is made up of a number of components, including daemons, Araxi Service, Adobe Extreme, and the Oracle database. It also includes Prinergy Administrator, the software that serves as the Prinergy system administration user interface.

Starting Prinergy Server

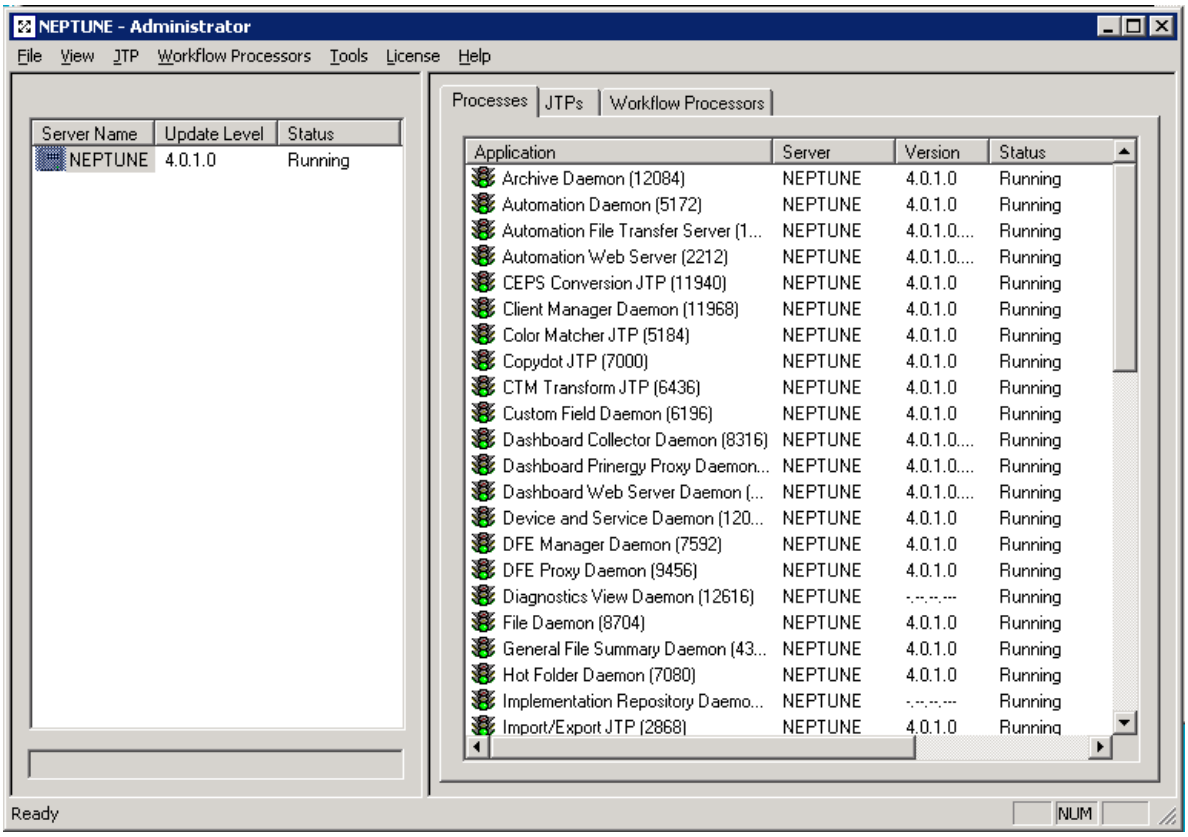
Use Prinergy Administrator to start Prinergy Server software on primary and secondary servers.

To start Prinergy Server using Prinergy Administrator:

1. Log on to a Prinergy server as an administrator.

   You must have administrator privileges in order to use Prinergy Administrator. If you have not logged on to the system using an account with administrator privileges, you will be prompted to log on with an appropriate account when Prinergy Administrator starts.

2. From the Windows **Start** menu, select **Programs** > **Prinergy** > **Prinergy Administrator**.



3. From the **File** menu, select **Start**.
4. Perform one of the following steps:
   - To start Prinergy on the most recently selected server, select the server by name.
   - To start Prinergy on all Prinergy servers in the Prinergy system, select **All Servers**.
5. Click **Start**. Prinergy may take a moment to start.

   Prinergy must be running on the primary server in order to process jobs. You can start Prinergy on a secondary server even if the primary server is stopped, but you will not be able to process jobs.

For more information about using Prinergy Administrator, see Administrator Help.

Stopping Prinergy Server

Use Prinergy Administrator to stop Prinergy Server software on various primary and secondary servers without shutting down the system. You may want to do this if a job or software is not responding.

To stop Prinergy Server using Prinergy Administrator:

1. Log on to a Prinergy server as an administrator.

   You must have administrator privileges in order to use Prinergy Administrator. If you have not logged on to the system using an account with administrator privileges, you will be prompted to log on with an appropriate account when Prinergy Administrator starts.

2. From the Windows **Start** menu, select **Programs** > **Prinergy** > **Prinergy Administrator**.
3. From the **File** menu, select **Stop**.
4. Perform one of the following steps:
   - To stop Prinergy on the most recently selected server, select the server by name.
   - To stop Prinergy on all Prinergy servers on the system, select **All Servers**.
5. (Optional) In the **Reason for shutdown** box, type the reason for stopping Prinergy.

   This information is logged in the Windows Application Event Log for troubleshooting.

6. Click **Stop**.

   Prinergy may take a moment to shut down.

For more information about using Prinergy Administrator, see Administrator Help.

3 Configuring Prinergy

How to Configure Prinergy.....20

How to Configure Prinergy

For step-by-step instructions on how to configure the Prinergy system, see Prinergy Administrator Help.

To view Administrator Help, start Prinergy Administrator. From the **Help** menu, select **Administrator Help**.

Configuring the Prinergy system includes:

- Managing licenses
- Configuring JTPs and JTP pools
- Managing user rights
- Managing Araxi services
- Managing servers
- Managing job volumes and input volumes
- Sharing files with Apple Macintosh computers
- Adding proofing devices and output devices
- Configuring preferences
- Setting up Rules-Based Automation
- Managing job folders
- Monitoring processes
- Managing history entries

4 Using the Archiver System

Main Tasks of the Archiver System 22
Archiver System Components 24
About Removable Storage Devices 27
About Archiving Media 30
Enabling the Archiver System 31
Overview of Using the Archiver System 32
Creating Copies of Your Archives 34
Developing an Archiving Strategy 36
Overview of RSM 42
About Media Pools 43
Managing Media Pools 46
Handling Archiving Media 49
Managing Archiving Media 51
Monitoring Operator Requests 56
Monitoring the System 57
Viewing Archive Information 58
Cleaning a Removable Storage Device Drive 59

Main Tasks of the Archiver System

The Archiver system enables you to migrate job data between online storage (hard drives) and near-line storage (removable storage media). To accomplish this, the Archiver system is responsible for three main tasks:

- Archiving job data
- Purging job data
- Retrieving job data

The Archiver system also includes the Media Manager tool in Prinergy Workshop, which lets you view information about the media pools and media in your system. The Media Manager also lets you copy media, check media for hard-read errors, and assign media a status of complete.

The Archiver system is an optional, licensed feature of Prinergy.

Archiving Job Data

When a job is archived, all job files are copied to removable storage media. Metadata about the job—that is, information about job data and files linking together—remain in the Oracle database on the primary server.

Note: The only type of media that the Archiver system currently supports is tape. Specifically, Prinergy supports DLT (Digital Linear Tape) and AIT (Advanced Intelligent Tape) tapes. You should only use the Archiver with qualified devices.
To find out which devices are qualified, contact your sales representative.

Purging Job Data

Once you use the Archiver to copy a job's files to removable storage media, you may want to delete the files from your server in order to free up disk space. Purging deletes selected files from the server; however, the job remains on the system because job metadata is retained in the Oracle database— including metadata that indicate which files can be found on which tapes.

The purge process verifies that files have been correctly archived before removing them from the system.

Retrieving Job Data

Retrieve archived files to restore a job to the file system. The Oracle database works with the Archiver system to retrieve the necessary files from removable storage media and restore them to the Prinergy file system.

Archiving vs. Backup: What's the Difference?

Archiving differs from backup. Although each may use similar technology and resources, they fulfill different but equally important roles.

An *archive* is a potentially permanent record of a set of related files—in this case, a job—that may span several file systems on one or more computers.

For example, job files in Prinergy can be stored on multiple servers: system files for the job may be stored in a job folder on the primary server, while the input files may be stored on a file server. The Archiver extracts all the necessary files on the system, regardless of which computers they are stored on, and writes them to archive media.

In *backup,* a duplicate image of a complete disk partition, file system, portion of a file system directory structure, Oracle database files and logs, and/or system share is saved for the purposes of disaster recovery—for example, in the event of a disk crash. Files are not saved in job context—that is, there is no relationship between backup files and the database. In fact, a system backup may not capture the file system state. Unlike an archive, which is often permanent, a backup is normally retained only until a more up-to-date record is made. For more information about backup, see Chapter 5, *Backing Up the Prinergy System*.

Important: The Archiver system does not perform system backup or back up the Oracle database.

The following table describes some of the key differences between an archive and a backup.

Feature	Archive	Backup
Permanent record?	Yes	No
Job context retained?	Yes	No
Intended to protect against disaster (for example, fire, disk crash, flood)?	No	Yes

Important: You should back up your Oracle database on a regular basis. Failure to do so may render your archives inaccessible in the event of a disk failure. For information about backing up your database, see Chapter 5, Backing Up the Prinergy System.

Archiver System Components

The Archiver system consists of:

- Archiver software, running on a single Prinergy server:
  - Microsoft Management Console (MMC)
  - Removable Storage Manager (RSM) snap-in
  - Archive/Retrieve JTP
  - Disk Purge JTP
  - Archiver daemon
- One or more removable storage devices, directly connected to the Prinergy server that MMC, RSM, Archive/Retrieve, and Disk Purge JTP are running on
- Removable storage media (for example, DLT or AIT tapes)
- The Media Manager in Prinergy Workshop

A Prinergy server on which you are running MMC, RSM, and the Archive/Retrieve and Disk Purge JTPs can be referred to as an archiving station.

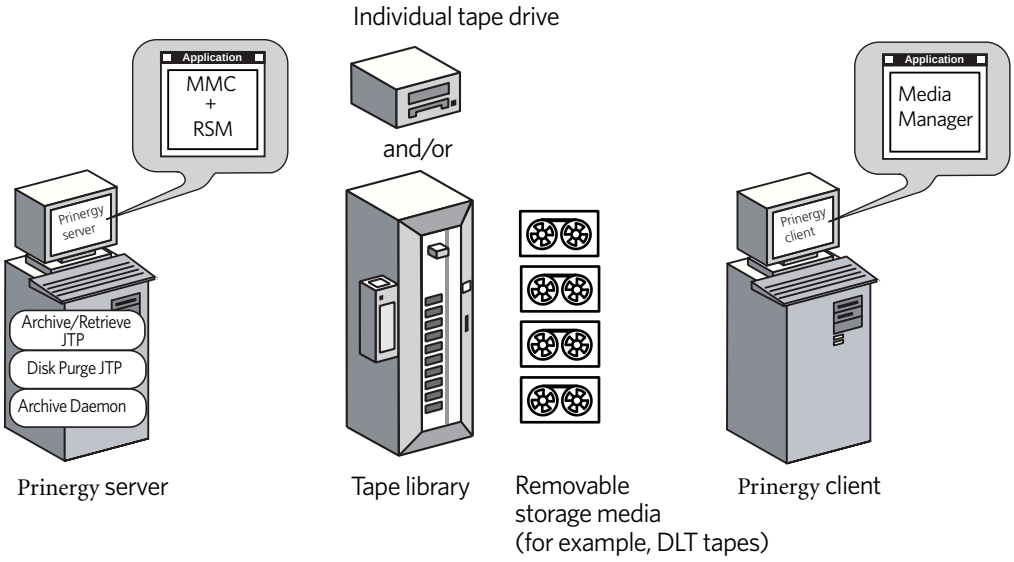


Figure 2: Archiver system software

Important: Once you set up the Archiver system on a Prinergy server, do not move this system. RSM stores contextual information about media and media pools within the archiving station's operating system. Moving the Archiver system to another server could result in a loss of this information, which may affect your ability to retrieve archived jobs.

Microsoft Management Console

Microsoft Management Console (MMC) is a feature of Windows that can be used to create, save, and open administrative tools (called MMC snap-ins) that manage the hardware, software, and network components of your Windows system.

MMC does not perform administrative functions, but instead hosts tools that do. The primary type of tool you can add to a console is called a snap-in. The Removable Storage Manager is an MMC snap-in.

Removable Storage Manager (RSM)

Microsoft Removable Storage Manager (RSM) is a Windows service that tracks removable storage media and manages removable storage devices, such as an individual tape drive or tape library. Use RSM to:

- Manage media pools (a way of logically grouping media)
- Physically manipulate media in the removable storage device(s)
- View RSM history and status
- View the status of the removable storage device(s)
- View the location and states of media

  Note: Location and states of media can also be viewed in the Media Manager in Prinergy Workshop.

RSM works in concert with data-management software—for example, it works with Prinergy to archive, purge, and retrieve job data.

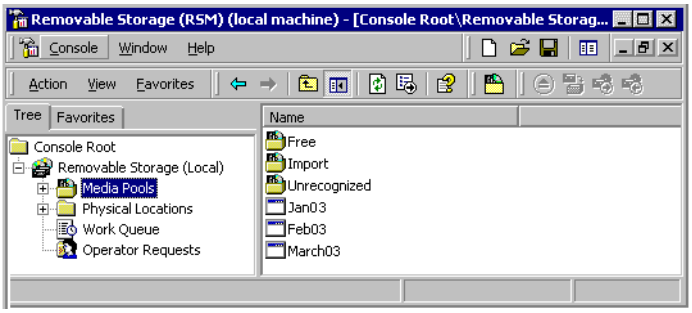
About the RSM Snap-In Interface

RSM consist of two view panes:

- The left pane contains the console tree. The console tree includes the four main RSM components: **Media Pools**, **Physical Locations**, **Work Queue**, and **Operator Requests**.
- On the right, the details pane shows the contents of the current left-pane selection.

Note: Other snap-ins can be added to the console, as can an RSM snap-in for another host.

For more information about using RSM, see RSM Help.



Using RSM to Share Removable Storage Devices

RSM makes it possible for multiple applications to share removable storage devices, which can reduce your costs. For example, you can use the same removable storage device for archiving and backup, provided each application uses RSM to interact with the removable storage device.

For more information about using the same removable storage device for archiving and backup, see *Using a Removable Storage Device for Archiving and Backup* on page 28.

Archive/Retrieve JTP

The Archive/Retrieve JTP writes whole jobs or selected job files to media, as directed by a process template in Prinergy Workshop. It can also read archived jobs or selected job files from media and return them to the job's home server.

The Archive/Retrieve JTP must be active on the archiving station—that is, the Prinergy server directly connected to the removable storage device(s) being used for archiving. Use Prinergy Administrator to add the Archive/Retrieve JTP to the archiving station.

For more information about adding JTPs, see Prinergy Administrator Help.

Disk Purge JTP

The Disk Purge JTP removes a selected job or selected files from the job's home server as directed by a process template in Prinergy Workshop. When a job or job file is purged from the system, information about the job (job metadata) is retained in the Oracle database, which allows you to retrieve the job from your archives. A file will not be removed from the disk until the Disk/Purge JTP verifies that the file has been archived.

The Disk Purge JTP must be active on the archiving station—that is, the Prinergy server directly connected to the removable storage device(s) being used for archiving. Use Prinergy Administrator to add the Disk Purge JTP to the archiving station.

For more information about adding JTPs, see Prinergy Administrator Help.

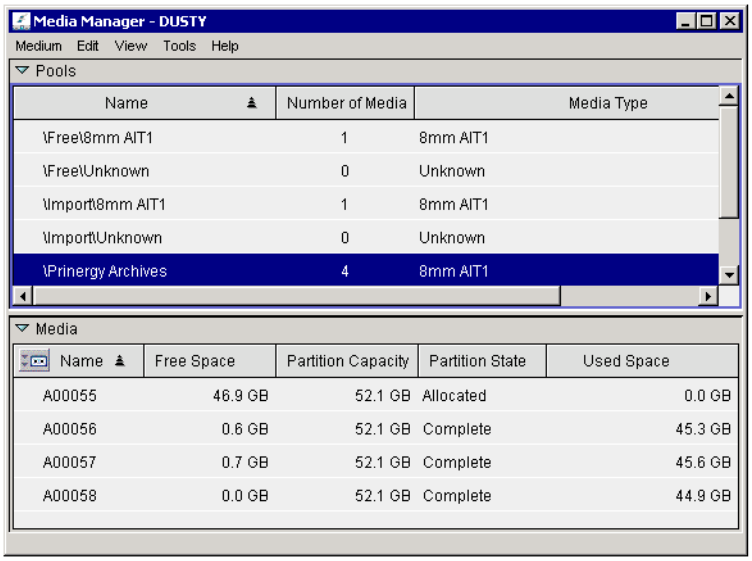
Archiver Daemon

The Archiver Daemon communicates with RSM and the Oracle database to support the Media Manager tool in Prinergy Workshop.

For information about this daemon, see *Prinergy Client Computer Installation Guide* on page 12. For information about daemons in general, see *About Server Software* on page 7.

Media Manager

The Media Manager tool in Prinergy Workshop lets users view information about removable storage media. The Media Manager displays a list of all media pools. The user can select one or more pools to display detailed information about media in those pools, including media type, location, amount of free space, and state.



In addition, the user can use the following commands in the Media Manager:

Medium Verify—Ensures that a medium can be read, that there are no hard-read errors on it, and that the format of the content is correct.

Medium Logical Copy—Copies all jobs on a given medium to other media in one or more pools. Can be used to replace a damaged medium or to copy data from one type of media to another (for example, DLT to AIT).

If any of the jobs on the source medium are already archived to a destination pool, they will not be copied to that pool again.

Medium Complete—Sets a medium to read-only. A completed medium is no longer used for new archives. You can still retrieve archives from it

For more information about the Media Manager, see Prinergy Workshop Help.

About Removable Storage Devices

A removable storage device can be used to read and write Prinergy job data to media. It must be directly connected to the Prinergy server that is running the Prinergy Archiver software (the archiving station).

Prinergy supports individual tape drives and tape libraries. For a list of compatible devices, contact your service representative.

Note: RSM supports a wide range of devices, but the Archiver system currently supports only DLT (Digital Linear Tape) and AIT (Advanced Intelligent Tape) tapes. You should only use the Archiver with qualified devices. For information about qualified devices, contact your sales representative. In addition to the archiving device, additional storage devices not related to the Archiver system (for example, a CD-ROM drive) also appear in the RSM.

Individual Tape Drive

An individual tape drive is a removable storage device with a single tape drive. It may also be called a stand-alone tape drive. You must manually insert and remove media from the tape drive.

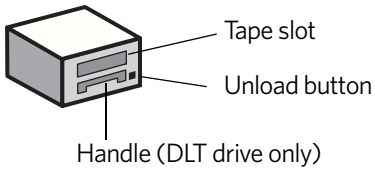


Figure 3: Individual tape drive

Tape Libraries

A tape library is a removable storage device that contains one or more tape drives. It can store numerous tapes in storage slots. Using robotics, it automatically moves media from the storage slots and loads and unloads media from its drives.

A tape library usually also includes a barcode reader that automatically reads identification information from a barcode affixed to the outside of a medium.

A tape library often has an inport and outport from which you load and unload media into the device. These can be combined into a single port or dual-purpose ports.

Note: A tape library may also be referred to as a jukebox.

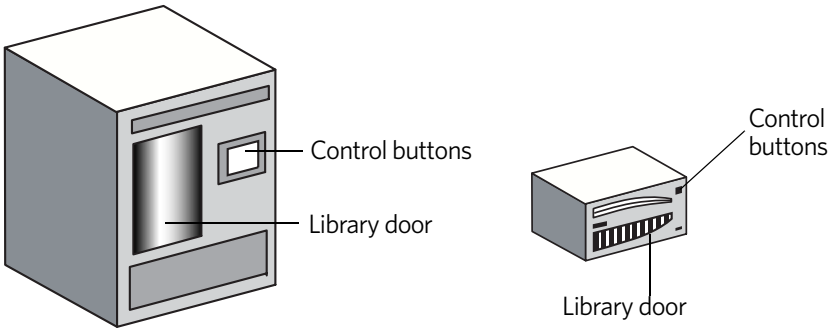


Figure 4: Tape libraries

Using Multiple Removable Storage Devices

You can use multiple removable storage devices with the Archiver system; however, all removable storage devices must be directly connected to the archiving station. Removable storage devices connected to the archiving station appear in RSM, provided an appropriate device driver is loaded.

Using a Removable Storage Device for Archiving and Backup

RSM enables you to use the same removable storage device(s) for archiving and backup. This can help reduce costs by maximizing your hardware use.

If you want to use the same removable storage device for archiving and backup, you must follow some hardware guidelines:

- If you use Prinergy Online Backup or Windows NT Backup software, the storage device must be directly connected to the primary server in order to ensure that backup is successful. This means that you must use the primary server as your archiving station.
- Use a tape library as a storage device to minimize media switching and maximize performance; do *not* use an individual tape drive.

You must also ensure that you separate archiving media from backup media to avoid overwriting important data. There are a number of guidelines to follow:

- Clearly physically label your media.

  If your removable storage device includes a barcode reader, you may want to label all tapes with a barcode for easier management, especially if you are using a tape library.
- Create separate media pools for archiving and backup, with a well-defined naming convention, and keep media in their respective pools. Ensure that you do not accidently move backup media to an archive-related pool, and vice versa.
- Keep the archive and backup media separate from one another when stored outside the removable storage device.
- If your backup solution includes automatic backups, you may want to devise a workflow schedule that prevents backup and archiving from occurring simultaneously.

For more information about backup, see Chapter 5, *Backing Up the Prinergy System*.

About Archiving Media

The only type of media that the Archiver system currently supports is tape. Specifically, the Archiver system supports DLT (Digital Linear Tape) and AIT (Advanced Intelligent Tape) tapes.

You should only use the Archiver with qualified devices. To find out which devices are qualified, contact your sales representative.

Important: The Archiver uses the Microsoft Tape Format (MTF) as its native format. This means that you can use the Windows NT Backup software to view a catalog of the files that are on an Archiver tape or to restore files from an Archiver tape. Previously, only the Archiver could be used for these tasks.

Important: If you want to use Windows NT Backup to read an Archiver tape, do not put the tape into the Backup\Prinergy pool. If you leave the tape in the Backup\Prinergy pool, the tape may be overwritten during the Prinergy backup procedure and the archived data will be permanently lost.

Tip: You can create a new pool and call it Backup\ArchiverTapes. Then when you want to use NT Backup to read an Archiver tape, you can put the tape into this pool and it will not be overwritten.

You should label all tapes with a barcode for easier management. For more information about handling archiving media, see *Handling Archiving Media* on page 49.

Enabling the Archiver System

To enable the Archiver system, you need to connect the removable storage device(s) and add the Archive/Retrieve JTP and Disk Purge JTP.

To enable the Archiver system:

1. Decide which Prinergy server you want to use as an archive station.

   If you're sharing a removable storage device with backup, you must use the primary server as the archive station.

   Important: Once you've set up the Archiver system on a specific Prinergy server, you should not move the system. RSM stores contextual information about media and pools within the archive station's operating system. Moving the Archiver system to another server could result in a loss of this information, which may affect your ability to retrieve archived jobs.

2. Connect the removable storage device(s) to the Prinergy server that you plan to use as an archive station.

   Once you connect a device, it appears in RSM. For information about how to connect your device, see the manufacturer's documentation.

3. If required, on the archive station, install the necessary device drivers.

   Check with your service representative to find out which versions of the device drivers are required.

   For information about installing device drivers, see the manufacturer's documentation.

4. On your archive station, log on as an administrator.

5. In Prinergy Administrator, add the Archive/Retrieve JTP and the Disk Purge JTP to the archiving station.

   For information about adding JTPs, see Prinergy Administrator Help.

6. Outline your archiving strategy and create process templates accordingly.

   For information about developing an archiving strategy, see Chapter 4, Developing an Archiving Strategy.

   For information about process templates, see Prinergy Workshop Help.

Overview of Using the Archiver System

This section provides an overview of using the Archiver system. The Archiver system works with Prinergy Workshop to:

- Archive job data
- Purge job data
- Retrieve job data

Note: Archiving, purging, and retrieving job data are the main Archiver tasks. You can also copy media, verify media, and set media to complete using the Media Manager in Prinergy Workshop.

For more information, see *Media Manager* on page 26 and Prinergy Workshop Help.

To use the Archiver system:

1. Develop an archiving strategy:
   a. Decide how you will organize and store media.

      It is essential that you establish an archiving strategy in order to meet your archiving requirements. For information about developing an archiving strategy, see *Developing an Archiving Strategy* on page 36.

   b. Use RSM to set up media pools according to your plan.

      Media pools are a logical way of organizing your information on media. Once created, they appear as options in the Process Template Editor, enabling you to direct an archive to a specific set of media.

      For more information, see *About Media Pools* on page 43 and *Managing Media Pools* on page 46.

   c. In Prinergy Workshop, modify or create process templates to do the following tasks:
      - Archive job files to specific media pools
      - Purge job files from the system
      - Retrieve job files

      Note: You will also need a process template to be able to copy a tape using Medium Logical Copy in the Media Manager.

      When creating an archive process template, you must specify the media pools to which you want to archive.

   Important: Make a second copy of your archives. To do this, always archive to more than one media pool. Having a second copy of your archives is similar to having a backup of important information on your computer's hard disk. If an archive tape is lost or damaged, having a second copy of the archive will allow your site to retrieve jobs that were stored on the lost or damaged tape.

2. In Prinergy Workshop, run the desired process template.

The Archiver system will carry out the request specified by the process template.

You can monitor the status of the request in the Prinergy Workshop Job Manager's **Active Processes** pane or from the Queue Manager. For more information about monitoring the process, see Monitoring the System on page 57.

Note: If an archive, retrieve, or purge request stops or fails, a record appears in the Active Processes pane for up to 30 minutes. For example, if you stop a purge request before it finishes and resend the request, the first request remains in the Active Processes pane, even if the second, completed request no longer appears. Entries for incomplete requests disappear after 30 minutes.

3. If prompted, complete any operator requests.

   Occasionally, you may be required to fulfill a request, such as inserting or ejecting media from the removable storage device. Prompts to complete a request appear in three ways:

   - In RSM, under **Operator Requests**
   - As a prompt message on the archive station
   - As a **Waiting for Operator Intervention** icon in Prinergy Workshop

   For more information about operator requests, see Monitoring Operator Requests on page 56. For more information about managing media in the removable storage device, see Managing Archiving Media on page 51.

Important: Always use RSM to physically manage media; avoid manually inserting or ejecting media using the device's front panel, unless prompted to do so by the system. When you use RSM, the system automatically tracks media. This way, the system does not have to run a device inventory, which can be time consuming.

4. If necessary, remove the media from the removable storage device and store it according to your archiving strategy.

   For information about process templates and the Process Template Editor, see Prinergy Workshop Help.

5. If desired, view historical information about archive, purge, and retrieve jobs after they are complete. You can view information about:

   - Individual archive, purge, and retrieve jobs in the **History** view of the Job Manager in Prinergy Workshop
   - All archive, purge, and retrieve jobs in system history in Prinergy Workshop (**Tools** > **System History**). You can also check historical information medium logical copy and medium verify processes in the system history.

   For more information about the system history, see Prinergy Workshop Help.

Creating Copies of Your Archives

You should always create duplicate copies of your archives by using an archive process template that writes archives to multiple media pools (and their corresponding media). This provides you with a backup of your archive media and may safeguard you against data loss, should a tape be lost or destroyed.

Note: This section describes creating copies of your archives at the time they are originally written. You can create copies of archival media using Medium Logical Copy in the Media Manager in Prinergy Workshop. For more information, see Prinergy Workshop Help.

If you are using a tape library, Prinergy can simultaneously write archives to two or more media pools. If you are using an individual tape drive, Prinergy will write consecutive archives to the pools specified in your process template.

Important: If you are using an archive process template that writes archives to multiple media pools, you must create a corresponding purge process template. The purge process template should specify the same pools used in the archive process template. This ensures that before purging a job or job files, the Archiver will verify that archives were successfully written to all pools. If you don't use a purge process template that specifies multiple pools, the Archiver will check only that each file has been archived to one media pool; you may accidentally purge a job before it has been successfully archived to multiple pools.

To create backup copies of an archive:

1. In RSM, create at least two application pools to be used as the archive destination.

   You may want to name the pools in a way that indicates they're related. For example, you could name the pools **Jan_Onsite** and **Jan_Offsite**. For more information about creating application pools, see Creating an Application Pool on page 46.

2. In Prinergy Workshop, modify or create an archive process template to direct Prinergy to write to the application pools that you just created—that is, ensure that at least two pools appear in the process template's **Archive Media Pools** box.



   When you use this process template to archive, your job will automatically be written to all pools listed in the process template and, therefore, to multiple media.

   For detailed information about creating process templates, see Prinergy Workshop Help.

3. In Prinergy Workshop, modify or create a purge process template that includes the same pools used in step 2 in the **Archive Media Pools** box.



Before purging a job, the Archiver will verify that archives were successfully written to the specified pools. If you don't use a purge process template that specifies multiple pools, the Archiver will check only that each file has been archived to one media pool; you may accidentally purge a job before it has been successfully archived to multiple pools.

4. When you are ready to archive, run the new archive process template. If prompted, follow any operator requests.

   Important: If you are using an individual tape drive, Prinergy will write consecutive archives, rather than simultaneous archives. The system will prompt you to insert a new medium when the first archive is complete. Prinergy will not be able to complete the second archive until you insert the requested medium.

5. Store the media according to your archiving strategy.

   For information about storing media, see Storing Media on page 37.

Developing an Archiving Strategy

This section describes some guidelines for developing an archiving strategy. Planning your archiving strategy in advance will help ensure that your archiving requirements are met.

There are a number of factors to consider when developing your archiving strategy:

- Have you safeguarded against media failure or loss?

  You should create at least two copies of your archives, to safeguard against media failure or loss. To do this, create archives using a process template that archives to multiple media pools. For information about multiple pools, see *Creating Copies of Your Archives* on page 34.

  For information about setting up process templates, see Prinergy Workshop Help.

- How long will you retain archives?

  It is important to plan how long you will retain archives to ensure that they are available when needed. The retention period may vary from job to job. Some jobs may need to be archived for only a very short period of time—for example, until they have gone to press. You may want to keep other jobs permanently.

- Which jobs will you archive, and which job components?

- How often will you archive—that is, at what point(s) in the workflow?

  For example, after proofing, after creating plates, or only when the job is off press.

- How will you organize your archives?

  This includes organizing archives into media pools. For information about media pools, see *Managing Media Pools* on page 46.

- How will you store your media?

  You need to determine where you will store your media—for example, onsite or at an offsite location.

Planning Which Jobs and How Often

Decide which jobs you plan to archive. For example, you may need to archive all jobs, or you may archive only some jobs. This will depend on your customers' requirements.

In addition, you need to decide when you will archive your jobs and how often. For example, you may choose to archive jobs only after a job has completed its press run, or you may want to archive a job before the press run. If you have a job that may go through a number of iterations, you may need to decide which revision(s) you want to archive.

Organizing Your Archives

Use application pools to help organize your archives.

You should determine how you will organize your application pools before you use the Archiver system. It may be difficult to reorganize the pools after jobs are archived to tape, since only media can be moved from pool to pool; you cannot move an archive from one medium to another.

Consider the following factors:

- Determine which attributes are most important for grouping archives.

  For example, if you retain archives for only a limited time, you may want to organize your archives according to date. If your customers retain their own archive media, you may want to organize your archives by customer.
- Consider how long you need to retain your archives. This may affect how you choose to organize your application pools.
- Create pools according to the chosen attributes and use names that contain those attributes. For convenience, name pools in a way that allows for easy sorting in RSM.
- Create duplicate copies of your archives. For example, you may want keep one copy offsite to ensure that your data is available in the event of an emergency, such as media failure, fire, or flood. You can automatically create a duplicate copy of your data by archiving to two or more application pools. For more information, see *Creating Copies of Your Archives* on page 34.

Storing Media

Take appropriate precautions to safeguard your media and its contents. Media should be stored in a cool, dark place, away from dust and heat.

For more information about the proper storage, care, and handling of media, see the information provided by the media manufacturer.

You also need to determine how long you will store your archives. You may need to retain your archives permanently, or you may only be required to keep them only for a limited period of time, for example, a year.

Create a copy of your archive data to keep offsite as an added precaution.

Tip: You can automatically create a duplicate copy of your data by archiving to two or more application pools. For more information, see Creating Copies of Your Archives on page 34.

Sample Archiving Scenarios

This section describes some sample archiving scenarios. Use them as guidelines to help develop an archiving strategy that suits your needs.

In order to best meet your needs, you may choose to develop a unique strategy that combines some or all of the following elements, as well as others not documented here.

Archives Grouped by Month

In this scenario, archives are grouped by month and the retention period is 18 months, after which time the archive media can be recycled.

To create archives grouped by month:

1. Create a Prinergy **Archives** master pool.

   This will help keep your Prinergy archiving media pools separate from other media pools that may by used by other applications—for example, backup.

   For information about how to use RSM to create an application pool, see RSM Help.

2. Within the Prinergy **Archives** pool, create an application pool for the year.

   For example, **2004**, **2005**, and so on.

3. Within the year pool, create subpools for each month.

   For example, **Jan_A, Jan_B**, **Feb_A**, **Feb_B**, **March_A**, **March_B**, and so on. Archive to two application pools (for example Jan_A and Jan_B) to create a duplicate copy of your data.

4. Each month, edit and update the archive process template(s) to reference the current monthly pools.

   To ensure that the correct process template is always used—that is, jobs are archived to the current pools—edit or delete the previous month's archive process template.

5. Recycle media after a designated time—for example, 18 months, by moving them to the **Free** pool.

   Important: Moving media to the **Free** pool permanently erases all data on the media.

Tip: Before moving a tape to the **Free** pool, run the Archive Medium Contents report to list the jobs that are on the tape. Make sure that you no longer need any of these jobs, and then destroy the jobs. If you don't destroy the jobs, once the tape is moved to the Free pool, the Prinergy database will still indicate that the jobs are on your system, but you will not be able to retrieve them.

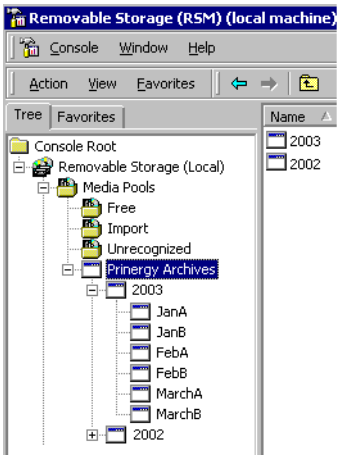


Figure 5: Application pools grouped by month

Archives Grouped by Customer

In this scenario, archives are grouped by customer. Note that because these archives are not organized by date, the archiving media cannot be easily recycled. You may want to follow this scenario if your customers plan to supply and store their archive media.

To create archives grouped by customer:

1. Create a Prinergy **Archives** master pool.

   This will help keep your Prinergy archiving media pools separate from other media pools that may by used by RSM, for example, backup.

   For information about how to use RSM to create an application pool, see RSM Help.

2. Within the Prinergy **Archives** pool, create at least two application pools for each customer.

   For example, **Customer1A**, **Customer1B**, **Customer2A, Customer2B, Customer3A, Customer3B**, and so on.

3. Create an archive process template for each customer.

   Edit the archive process template to reference both A and B pools, for example, customer1A and customer1B.

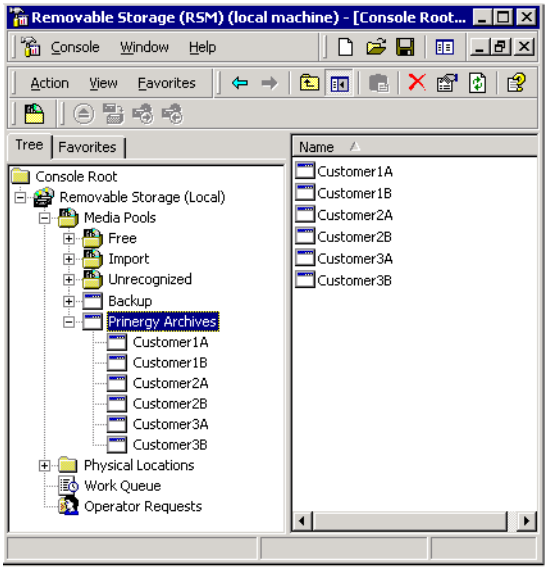


Figure 6: Application pools grouped by customer

Archives Grouped by Location (Onsite/Offsite)

In this scenario, a duplicate copy of the archive is created for offsite storage. Offsite storage safeguards your data in the event of an emergency, such as fire, theft, or media failure.

To create archives grouped by location:

1. Create a Prinergy **Archives** master pool.

   This will help keep your Prinergy archiving media pools separate from media pools that may by used by other applications—for example, backup.

   For information about how to use RSM to create an application pool, see RSM Help.

2. Within the Prinergy **Archives** pool, create two application pools: **Onsite** and **Offsite**.

3. Create an archive process template that archives to both pools.

4. Move archive media from the **Offsite** pool to an offsite location on a regular basis—for example, weekly, monthly, or when media are full.

   Tip: If you plan to move media only when full, keep only a small number of **Offsite** pool media in the library to ensure that these media are filled quickly. Use the Media Manager or run an Archive Medium Capacity report to check how much space is available on a medium. For more information, see Prinergy Workshop Help.

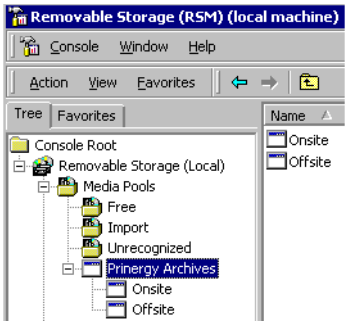


Figure 7: Application pools grouped by location

Archives Grouped by Month and Location

In this scenario, archives are grouped by month, with a duplicate copy being created for offsite storage.

To create archives grouped by month and location:

1. Create a Prinergy **Archives** master pool.

   This will help keep your Prinergy archiving media pools separate from media pools that are used by other applications—for example, backup.

   For information about how to use RSM to create an application pool, see RSM Help.

2. Within the Prinergy **Archives** pool, create an application pool for the year.

   For example, **2004, 2005,** and so on.

3. Within the year pool, create subpools for each month, for example, **Jan**, **Feb**, **March**, and so on.

4. Within each monthly pool, create an **Onsite** pool and an **Offsite** pool.

5. Archive each job to both current monthly pools using the appropriate process template.

6. Each month, edit and update the archive process template(s) and purge process template(s) to reference both subpools in the current monthly pool.

   To ensure that the correct process template is always used—that is, jobs are archived to the current pool—edit or delete the previous month's archive and purge process templates.

7. At the end of each month, move the media from the offsite monthly pool to an offsite location.

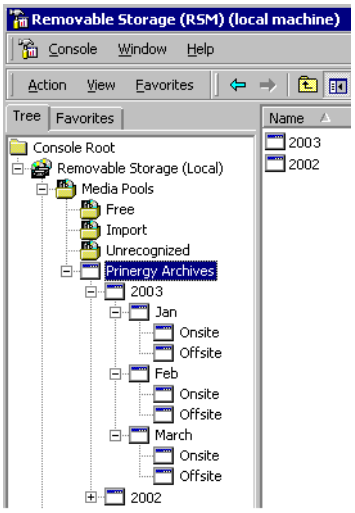


Figure 8: Application pools grouped by month and location

Overview of RSM

This section provides a basic overview of RSM as it relates to Prinergy. RSM is a built-in component of Windows and can be used by other applications, such as backup.

For detailed information about using RSM, see RSM Help.

RSM Components

The RSM snap-in consists of two view panes and uses a directory structure similar to Windows Explorer. The left pane contains the console tree, which includes the main components of RSM. The details pane, on the right, shows the contents of the current left-pane selection.

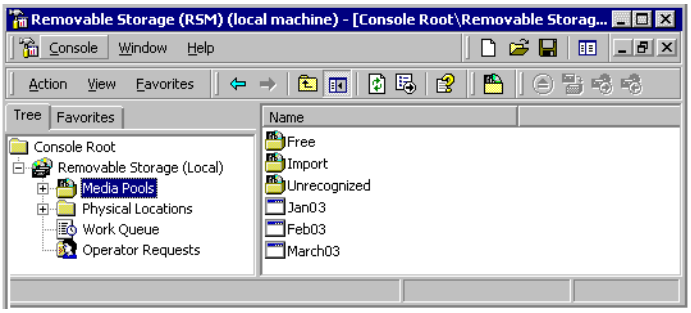


Figure 9: Windows RSM window

The following table describes RSM's four main components or views.

Component	Description
Media Pools	A means of logically organizing removable storage media. Provides a view of media by logical grouping.
Physical Locations	A list of devices known to RSM on this system. Provides a view of media and devices by location.
Work Queue	A status and history of tasks in the RSM work queue.
Operator Requests	A status and history of requests from software using RSM, such as the Archiver.

Starting RSM

The RSM service starts automatically when Windows starts. Start the MMC with the RSM snap-in from the Windows **Start** menu on the Prinergy archiving station.

To start the RSM snap-in:

➢ On the Prinergy archiving station, from the Windows **Start** menu, select **Programs > Prinergy > Removable Storage Management**.

Note: This snap-in is for the local host. Though you can start RSM on other servers, you must start RSM on the archive station in order to view archive-related information.

About Media Pools

A media pool is a logical group of archive media. There are two types of media pools:

- *System pools*—built into RSM and a means of organizing media not yet used.
- *Application pools*—you define to organize which media are used for which purpose. A medium that has been used for archiving jobs in your Prinergy system will belong to one of the application pools created for archiving.

How RSM Identifies Media

RSM organizes all the media in your libraries into different media pools. RSM also assigns media to media pools in order to provide the near-line data storage space that your applications require. Near-line refers to media that are in the tape library, and are available to be written to or read from, but are not currently in the drive.

When a medium is inserted into a removable storage device, RSM automatically does one of the following tasks:

- For a medium previously seen by the system, updates medium location

  If a medium has been previously seen by an application, that application will have written a unique ID in the medium's header, which RSM uses to recognize the medium.

- For a medium that is new to the system, assigns the medium to the appropriate system pool

  If the medium is not yet initialized or was initialized by an application in another system, it is assigned to one of the three system pools:

  - **Free**—for a medium containing a "free media label" header
  - **Unrecognized**—for a medium that is blank or has an unrecognized header
  - **Import**—for a medium containing a header in a recognized format (that is, a format used by a known application), but that is new to the system

The following section describes system pools in detail.

For more information about media pools, see RSM Help.

System Pools

There are three system pools:

- **Free** pool
- **Unrecognized** pool
- **Import** pool

About the Free Pool

The **Free** pool contains blank, prepared media—that is, media that have a "free media label" header. RSM writes a "free media label" header on a medium when it is moved to the **Free** pool. Media in the **Free** pool can be used as a source of new media to write to.

A medium is not automatically assigned to the **Free** pool; you must move it to the **Free** pool from another pool.

Important: Moving media to the **Free** pool permanently erases all data on the media.

About the Unrecognized Pool

The **Unrecognized** pool contains media that do not have a header in a recognizable format, and thus are not recognized by the system.

For example, if you insert a brand new tape—that is, a medium that contains no data and no header—it is assigned to the **Unrecognized** pool. A medium that contains data but does not include a recognizable header is also assigned to the **Unrecognized** pool.

In order to make a medium from the **Unrecognized** pool available for use, you must first move it to the **Free** pool. Moving it to the **Free** pool causes RSM to write a header on the medium. Once a medium is in the **Free** pool, you can move it to an application pool, or it may be drawn to an application pool by an application when the application allocates a new medium.

A medium in the **Unrecognized** pool is not remembered by the system once it has been ejected from the removable storage device. This is because it does not have a recognizable header.

About the Import Pool

The **Import** pool contains media that are in a format recognized by RSM, but that are new to RSM.

Note: If you are also using your removable storage device for backup, your backup media are part of the RSM library.

The following types of media may appear in the **Import** pool:

- Prinergy tapes from another Prinergy system
- Windows NT Backup tapes

You can move a medium in the **Import** pool to the **Free** pool, where it is available to be written to as needed.

You can also move a medium in the **Import** pool directly to an application pool; you do not need to assign it to the **Free** pool first. For example, you could do this for Windows NT Backup tapes.

Note: If you assign **Import** pool media directly to an application pool, the data on the media is retained.

Important: Moving media to the **Free** pool permanently erases all data on the media.

Application Pools

Application pools are user-defined pools. They may contain media that have been used to archive jobs in your Prinergy system. They may also contain media used in system backup.

Use application pools to logically organize your media, for example, you can create application pools to organize Prinergy archive media and jobs by month or by client. When you archive a job, you must specify in the archive process template which application pools to write to.

You can create any number of application pools in order to organize your media. Your archiving strategy determines how many application pools you create for archiving and how to organize them. For more information about developing an archiving strategy, see *Developing an Archiving Strategy* on page 36.

An application pool can contain an unlimited number of media. Media assigned to an application pool remain part of that pool, even if offline—that is, not currently in the removable storage device.

Tip: Automatically create a duplicate copy of your data by archiving to two or more application pools. For more information, see Creating Copies of Your Archives on page 34.

Note: If you are using your removable storage device for backup, you may also need to create application pools to manage backup media.

Important: If you are using the same removable storage device for backup and archiving, organize your application pools in a way that clearly separates the two. This will help avoid accidently overwriting important data.

Managing Media Pools

This section describes some basic principles about managing media pools using RSM.

A medium can belong to only one media pool at a time. For example, a tape that belongs to the **Free** pool cannot also belong to an application pool.

Table 1 on page 48 briefly describes how to perform various media pool-related commands with RSM.

For detailed information about how to use RSM, see RSM Help.

Moving Media to the Free Pool

You can move media to the **Free** pool from any media pool. When a medium is assigned to the **Free** pool, RSM writes an identification header on the medium.

Following are reasons why you might want to move media to the **Free** pool:

- To prepare media from the **Unrecognized** pool for archiving or other use. A medium in this pool must be moved to the **Free** pool before it can be moved to an application pool. Blank media automatically appear in the **Unrecognized** pool.
- To erase media from the **Import** pool or an application pool. The media will then be available to application pools that have been configured to automatically take a medium from the **Free** pool as needed.

Note: A medium from an application pool must be in the Available state for you to be able to move it to the **Free** pool. This means the medium is not currently allocated to an application.

Important: Moving media to the **Free** pool permanently erases all data on the media. See the procedure described next for handling tapes before moving them to the Free pool.

Before moving a tape to the Free pool:

1. Ensure that you no longer need any of the jobs on the tape.

   When you move the tape to the **Free** pool, RSM will write a "free media label" header on the tape, and you will no longer be able to retrieve any jobs on the tape.

2. Also destroy the jobs in Prinergy Workshop.

   If you move the tape to the **Free** pool but do not destroy the jobs, Prinergy Workshop will show the jobs as archived and offline, even though the data is no longer available on the tape and the job cannot be retrieved.

Creating an Application Pool

Use application pools to organize your media. You can create any number of application pools. Once you create an application pool, it is available in the Prinergy Workshop Process Template Editor.

Use RSM to create application pools.

For information about how to use RSM to create an application pool, see RSM Help. For information about the Process Template Editor, see Prinergy Workshop Help.

Before using the Archiver system, determine how you will set up your application pools. It may be difficult to reorganize the pools after jobs are archived to media, since only media can be moved from pool to pool; you cannot move an archive from one medium to another.

You may want to follow these guidelines:

- Determine which attributes are most important for grouping archives—for example, customer name, account/docket number, month/year, publication, and so on.
- Create pools according to the chosen attributes and use names that contain those attributes.
- Create subpools to help further organize your pools. For example, if you are also using your removable storage device for backup, you may want to create a main pool for archiving, and then create archiving subpools.
- For convenience, name pools in a manner that allows for easy sorting in RSM.

For more information about strategies for creating application pools, see *Developing an Archiving Strategy* on page 36.

Important: When creating a new media pool in RSM, do not select the **Return media to Free media pool** option on the **General** tab in the Create a New Media Pool Properties dialog box. When the **Return media to Free media pool** option is selected, media are automatically returned to the **Free** pool when not required by the application pool. If this option is selected and a tape is accidentally de-allocated, all the data on the tape will be permanently lost. The option makes sense for backup tapes that are continuously recycled, but you will rarely need to recycle an archiving tape. Follow the steps in Before moving a tape to the Free pool on page 46.

Archiving to Multiple Media Pools

Archive to multiple media pools to create copies of your data on multiple tapes, as backup copies of your archives. For more information about archiving to multiple media pools, see *Creating Copies of Your Archives* on page 34.

Media Pool Commands Quick Reference Table

This section describes how to perform some basic media pool-related tasks using RSM.

For detailed information about using RSM, see RSM Help.

Table 1: Media pool commands quick reference table

To...	Do this...
Create an application pool	1. In the console tree, right-click **Media Pools**, and select **Create Media Pool**. 2. Set the desired properties, and then click **OK**.
Rename an application pool	1. In the console tree, double-click **Media Pools**. 2. Right-click the applicable media pool, and select **Properties**. 3. On the **General** tab, in the **Name** box, type the new name.
Set a description for an application pool	1. In the console tree, double-click **Media Pools**. 2. Right-click the applicable media pool, and select **Properties**. 3. On the **General** tab, in the **Description** box, type a relevant description.
Delete an application pool	1. In the console tree, double-click **Media Pools**. 2. Right-click the application pool that you want to delete, and select **Delete**.
Automatically **draw media from the Free pool** when no media are available in the application pool	1. In the console tree, double-click **Media Pools**. 2. Right-click the applicable media pool, and select **Properties**. 3. On the **General** tab, select the **Draw media from Free media pool** check box. **Note:** If you do not select the **Draw media from Free media pool** check box, you must manually move media from a **Free** pool whenever this media pool needs additional media**.**
Move a medium from one pool to another	1. In the console tree, select **Physical Locations > <your device> > Media**. 2. In the details pane, select the applicable medium. 3. Drag the medium to the applicable media pool in the console tree. **Note:** Moving media to the **Free** pool permanently erases all data on the media.
View the contents of a media pool	• In the console tree, select the media pool that you want to view. The details pane shows the contents of that pool.

Handling Archiving Media

This section contains information about the general care and handling of archiving media.

Labeling Media

To prepare a medium for use in the Archiver system, first make sure it is clearly labeled with a unique name. It should be the same name that you give the medium when you insert it in the Archiver system. This makes it easier to keep track of your archives and will help avoid accidently overwriting media.

For more information about inserting and naming media, see *Managing Archiving Media* on page 51.

Labeling Strategies

There are two ways to label media:

- By hand. This option requires you to devise your own naming strategy, and is available only for individual tape drives.
- Using printed barcode labels. If your archive device has a barcode reader, you must use a barcode system.

If you label media by hand, make sure your naming strategy:

- Is readily extensible, that is, lets you add media to the archive without running out of names
- Uses names of 64 characters or less

A barcode system involves labeling media with pre-printed barcoded labels with alphanumeric names. You can obtain barcodes from your tape manufacturer.

When ordering barcode labels, ensure that all of the barcodes used in your system are unique. To do this, specify a different range of labels each time you add media to your system.

Tape libraries come with a barcode reader that scans media loaded in the removable storage device and transmits the information to RSM. RSM then assigns a name to the media based on the barcode.

Advantages of a Barcode System

Use a barcode system to label media, even if your archiving device does not have a barcode reader. This has a number of advantages:

- Most tape libraries have a barcode reader. This can save you the step of naming media in the Archiver system and ensures that the labels on the media match the system name.
- If you are using an individual tape device, you can easily upgrade your existing archives, should you decide later to get a tape library with a barcode reader.
- You do not have to devise your own naming strategy. Barcodes provide an unlimited expansion path.
- Using barcodes to track media is generally much faster because each tape or disc does not have to be mounted to read the on-media identifier.

Handling Media

Handle your media with care to guard against damage and data loss. Your media manufacturer provides guidelines on the safe handling of media.

Managing Archiving Media

This section describes some basic principles for using RSM to manage archiving media.

RSM provides a means of physically managing media in the removable storage device as well as a way to view an inventory of your current media library.

Table 6 on page 54 briefly describes how to perform archiving media-related commands using RSM.

For information about how to use RSM, see RSM Help.

Viewing Physical Locations

The **Physical Locations** component of RSM lets you physically manage media in the removable storage device and view media according to the physical location.

Physical Locations is a component in the RSM console tree. These tables describe the following information:

- Table 2 on page 52 describes the Physical Locations components.

  When you select a component, the details pane shows the selection's contents. For example, if **Off-line Media** is selected, the details pane shows all the media that are currently offline—that is, not in the removable storage device.
- Table 3 on page 52 and Table 4 on page 53 describe the Physical Locations information that appears in the details pane.
- Table 5 on page 53 describes different media states.

Table 2: Physical Locations components described

Component	Description
Off-line Media	Provides a view of media that are part of your archive but are not currently in a removable storage device.
Library	Provides views of media currently in the removable storage device. There are two views: • **Media**—when selected, provides a list of all media in the removable storage device • **Drives**—when selected, provides a list of drives in the removable storage device

Table 3: Details pane information for Off-line Media and Library > Media

Columns for **Off-line Media** and **Library > Media**	Description
Name	System name for medium.
Description	Description of medium status.
Location	Location of medium, for example, Slot 2 or Drive 0.
Media Pool	Name of media pool to which medium belongs.
State	There are two media state components: • Physical states—identify operations performed that involve media location or movement. For example, “loaded” or “mounted.” • Side states—identify operations performed that involve media usage rather than location or movement. For example, “Allocated” or “Available.” Table 5 on page 53 describes the different media states.

Table 4: Details pane information for Library > Drives

Drive columns	Description
Name	System name of the drive.
Description	User-defined name of the drive.
State	Physical states identify operations performed that involve media location or movement. For example, “dismountable” or “empty.” Table 5 on page 53 describes the different media states.
Loaded Media	Name of the medium in the drive.

Table 5: Media state definitions (physical and side)

Media state	Definition
Idle	Medium is in a holding slot or is offline.
In-use	Medium is in the process of being moved.
Loaded	Medium is mounted in a drive and data is available to be read or written.
Mounted	Medium is in a drive but is not available to be read or written.
Unloaded	Medium has been dismounted and is ready to be removed from a drive.
Allocated	Medium is reserved for use by an application and is not available to any other application.
Available	Medium is currently available for use by an application.
Completed	Medium is in use but cannot be used for write operations because it is full.
Decommissioned	Medium is no longer available for use, as it has reached its maximum number of allocations.
New	Medium type is recognized by the system, but the ID (header) is not recognized.
Incompatible	Medium is not compatible with the system and should be removed.
Reserved	Medium is unavailable for allocation except by a single application. This applies only to two-sided media, where one side has already been allocated.
Unprepared	Medium has been placed in the **Free** pool but does not yet have a free media label. This is a temporary state.
Unrecognized	Medium type and ID (header) are not recognized by the system.

Updating the Inventory

You may occasionally want to ask RSM to update the inventory of the removable storage device.

Perform this step if RSM does not appear to accurately reflect the contents of the removable storage device. For example, you will have to do an inventory if you use the front panel controls on the removable storage device to eject media.

Tip: In general, you should rarely have to do a manual inventory, provided you use RSM to manage media in the tape device. This way, the system is able to keep an accurate inventory of media.

Note: You should avoid doing a manual inventory, particularly if you are using a large tape library, as the process can be time consuming. However, if the RSM state does not accurately reflect the actual state of the device, an inventory is likely required.

Managing Media in the Removable Storage Device

Use the right-click menus in RSM to physically manage media in the removable storage device. Table 6 on page 54 briefly describes how to perform basic commands with RSM.

Important: If your library supports it, always use RSM to physically manage media; avoid manually inserting or ejecting media using the device's front panel, unless the system prompts you to do so. When you use RSM, the system can automatically track media. The system does not have to run a device inventory, which can be time consuming.

For more information about using RSM, see RSM Help.

Table 6: Media-related RSM commands

To...	Do this...
Inject a medium	1. In the console tree, double-click **Physical Locations**. 2. Right-click the applicable library, and select **Inject**. 3. Follow the instructions in the Media Inject wizard. **Note:** For a tape library, insert the medium using the inport/outport. For a stand-alone device, you must manually insert the medium.
Eject a medium	1. In the console tree, select **Physical Locations > <your device> > Media**. 2. In the details pane, right-click the applicable medium that you want to eject, and select **Eject**. 3. Follow the instructions in the Media Eject wizard. **Note:** For a tape library, eject the medium using the inport/outport. For a standalone device, you must manually unload the tape.
Mount a medium in tape drive so that the medium can be analyzed **Note:** Be sure to dismount the medium afterwards.	1. In the console tree, select **Physical Locations > <your device> > Media**. 2. In the details pane, right-click the applicable medium, and select **Mount**.

To...	Do this...
Dismount a medium	1. In the console tree, select **Physical Locations > <your device> > Media**. 2. In the details pane, right-click the applicable medium, and select **Dismount**. Or: 1. In the console tree, select **Physical Locations > <your device> > <*current drive*>**. 2. In the details pane, right-click the drive that contains the medium you want to dismount, and select **Dismount**.
Enable or **disable** a medium	1. In the console tree, select **Physical Locations > <your device> > Media**. 2. In the details pane, right-click the applicable medium, and select **Properties**. 3. On the **Media** tab, perform one of the following steps: ▪ To enable a medium, verify that the **Enable media** check box is selected. ▪ To disable the medium, clear the **Enable media** check box. **Note:** Disabling the medium makes it unavailable for use.
Move a medium from one pool to another	1. In the console tree, select **Physical Locations > <your device> > Media**. 2. In the details pane, select the applicable medium. 3. Drag the medium to the applicable media pool in the console tree. **Note:** Moving media to the **Free** pool permanently erases all data on the media.
Prepare a medium for the **Free** pool by manually deleting all data	**Important:** Before following the instructions below, perform the Before moving a tape to the Free pool procedure on page 46. 1. In the console tree, select **Physical Locations > <your device> > Media**. 2. In the details pane, right-click the applicable medium, and select **Prepare**.
Do an **inventory** of all media in a tape library	1. In the console tree, double-click **Physical Locations**. 2. Right-click the library that you want to inventory, and select **Inventory.**

Monitoring Operator Requests

This section describes how to monitor operator requests from the Archiver system. Occasionally, you may be required to carry out a request in order for the Archiver to complete a task. The following table describes these requests.

Operator request	Appears when...
Please insert tape XXXNNN into the library.	An archive/retrieve request or task requires a tape that is offline.
Please insert a cleaning cartridge into the library.	A cleaning task is required for the drive.

Where Do Operator Requests Appear?

Prompts to complete an operator request appear in three places:

- In RSM, under **Operator Requests**
- On the archiving station, as a prompt message
- In Prinergy Workshop, as a **Waiting for operator intervention** icon

If the Archiver appears to be taking a long time to complete a task, check these places to see if you must perform an operator request before the Archiver can proceed.

Requests in RSM

You can view the status and history of operator requests from the **Operator Requests** component of RSM.

To view operator requests in RSM:

➢ In the RSM console tree, select **Operator Requests**.

A list of operator requests appears in the details pane.

Requests As Prompt Messages

Operator requests from the Archiver appear as prompt messages on the archiving station; they do not appear on other Prinergy servers. When carrying out an Archiver task, you may want to occasionally check the archiving station to see if there are any operator requests to perform.

Requests From Prinergy Workshop

Operator requests from the Archiver appear as the **Waiting for operator intervention** icon in Prinergy Workshop on any Prinergy server or client computer on the system.

For more information about viewing prompt icons, see Prinergy Workshop Help.

Monitoring the System

This section describes how to monitor the status and history of tasks requested of the Archiver system with the RSM **Work Queue**. Use **Work Queue** to view the status and history of various tasks requested of the Archiver system.

To view the Work Queue:

➢ In RSM, select **Work Queue**.

The **Work Queue** displays a list of all Archiver tasks undertaken since the Archiver software last started, to a maximum of 20. This list is automatically purged after a set number of hours, as configured.

Table 7 describes the columns displayed in the Work Queue details pane. Table 8 describes possible column entries.

Table 7: Work Queue details pane columns

Column name	Description
State	Current state of the task—for example, "Completed." For a detailed description of possible task states, see Table 8.
Operation	Type of operation requested—for example, "Eject."
Description	The physical location where the task is being performed—for example, a library or specific medium.

Table 8: Work Queue task state descriptions

Work Queue task state	Descriptions
Queued	RSM has not yet begun the task; this is the time between when the request is issued and when RSM starts examining the request.
In Process	Task is being processed.
Completed	Task was successfully completed.
Failed	Task was not successfully completed. To see a description of the failure, highlight the Failed task.
Waiting	Task has stopped and is waiting for an event to happen before it can continue—for example, a mount request when a drive is already in use will pause the request until the drive is dismounted.

Viewing Archive Information

There are several ways to get information about your media and archives, including:

- Media Manager, available from Prinergy Workshop

  Use the Media Manager to view a list of media pools and information about media in those pools, such as free space, used space, and state.

  See Using the Media Manager on page 58.

- Windows NT Backup

  You can use Windows NT Backup to view a catalog of the files that are on an MTF format tape. The Prinergy Archiver uses MTF as its native format. For information about Windows NT Backup, see the Windows NT Backup documentation.

  Important: If you want to use NT Backup to read an Archiver tape, do not put the tape into the Backup\Prinergy pool. If you leave the tape in the Backup\Prinergy pool, the tape may be overwritten during the Prinergy backup procedure and the archived data will be permanently lost.

  Tip: You can create a new pool and call it Backup\ArchiverTapes. Then when you want to use NT Backup to read an Archiver tape, you can put the tape into this pool and it will not be overwritten.

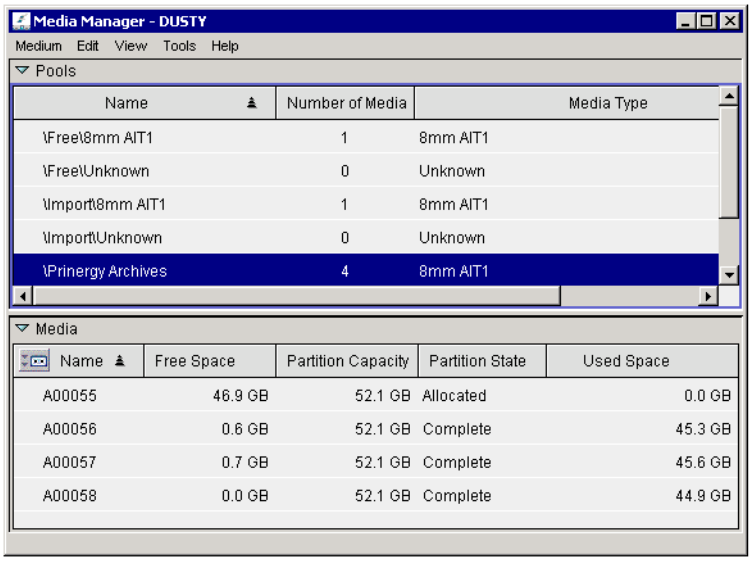
Using the Media Manager

The Media Manager, available from Prinergy Workshop, lets you view information about media in your system.

To use the Media Manager:

➢ In Prinergy Workshop, from the **Tools** menu, select **Media Manager**.

The Media Manager window appears.



For more information about the Media Manager, see Prinergy Workshop Help.

Cleaning a Removable Storage Device Drive

You occasionally need to clean your removable storage device drive(s) in order to keep it operating at an optimal level. These scenarios may indicate that you need to clean the drive:

- The drive consistently gives read/write errors.
- You have not recently cleaned the drive.
- The drive signals that cleaning is required (rather than recommended).

Important: In general, clean a drive only if required. Cleaning a drive too often can produce unnecessary wear, shortening the drive life.

Note: The cleaning medium has a limited life; for example, an AIT cleaning medium can be used approximately 70 times before it becomes ineffective.
Make sure the cleaning medium that you use is valid.

For more information about cleaning a drive, see RSM Help and the documentation provided by the device's manufacturer. For more information about cleaning media, see the media manufacturer's documentation.

5

Backing Up the Prinergy System

What Is Backup? 62
Prinergy Backup Components 63
Prinergy Backup Options 66
Developing a Backup Plan 67
Using the Basic Backup Option 72
Using Prinergy Online Backup 74
Using Oracle Backup Manager 77

What Is Backup?

Making a backup involves saving a copy of a complete disk partition, file system, or part of a file system directory structure for the purpose of disaster recovery.

For Prinergy, you must:

- Back up the Oracle database.

  The database is initially backed up to disk. You must also save the backup to media.

- Back up the system drives of your primary and secondary servers to preserve system configuration settings.

Backup differs from archiving. In archiving, only files related to a specific job are saved. For information about archiving, see Chapter 4, *Using the Archiver System*.

Why Is Backup Important?

It is essential that the database and system data are regularly backed up to media. This is the best way to minimize data loss or damage caused by problems such as disk failure, power outages, and virus infections. Back up your system every day to ensure maximum data recovery in the event of a problem.

In addition, you should run regular tests to ensure that your backup files will be available in the event of an emergency.

Prinergy Backup Components

A Prinergy backup system consists of:

- Oracle Backup Manager software
- Backup software

  This can be either the Prinergy Online Backup option or your own backup software. You will use backup software to save the backup of the Oracle database to media and to back up the system drives of the primary and secondary servers.
- One or more removable storage devices such as a tape library
- Backup media (DLT and AIT tapes are supported)
- Microsoft Management Console (MMC)
- Windows Removable Storage Manager (RSM) snap-in

About Oracle Backup Manager Software

Oracle Backup Manager is included with all Prinergy systems. It is configured to automatically backup the Oracle database on a designated local disk.

Important: Oracle Backup Manager software backs up the database to a local disk. It is essential that you save the backup of the Oracle database to media to ensure that the information is available in the event of a disaster such as disk failure.

About Backup Software

Your backup system must include software for backing up the Oracle database backup to media and for backing up the system drives of the primary and secondary servers.

If you have purchased the Prinergy Online Backup option, your system is configured to automatically back up your system. Prinergy Online Backup can back up your system drives to tape or to a file on disk (local or over the network).

If you back up your system drives to a file on disk, you must subsequently save that backup file to media to ensure that the information is available in the event of a disaster such as disk failure. If you back up to a file on disk, you should subsequently back that file up to media. If your company has a corporate backup strategy, you can make the Prinergy backup file available on a server so it is backed up as part of that strategy.

If you did not purchase the Prinergy Online Backup option, you must provide your own backup software. You are responsible for configuring this software, which must be Windows-compatible.

About Removable Storage Devices

A removable storage device reads and writes backup data to media. Currently, DLT and AIT tapes are supported. You must use a removable storage device that can be used by the Windows Removable Storage Manager (RSM) and that your service representative has qualified for use.

You may be able to use the same device for backup and archiving. See *Using a Removable Storage Device for Archiving and Backup* on page 28.

Types of Removable Storage Devices

There are two basic types of removable storage device:

- Individual tape drive
- Tape library

An individual or stand-alone tape drive is a removable storage device with a single tape drive. You must manually insert and remove media from the tape drive.

A tape library is a removable storage device that contains one or more tape drives. It can store numerous tapes in holding slots. It automatically moves media from the holding slots and loads and unloads media.

Important: If you use Prinergy Online Backup and you expect backups to span more than one tape, you must use a tape library rather than an individual tape drive. When you use a tape library, Prinergy automatically writes data to the next tape in the media set. When you use an individual tape drive with the Prinergy Online Backup option, backup data must fit on a single tape or the backup will fail.

About Backup Media

If you use Prinergy Backup software (part of the Prinergy Online Backup option) to back up to media, the recommended media types are DLT and AIT tapes.

If you use your own backup software, you can back up to the media of your choice. If you use Prinergy Backup software to back up to a file, you must then back up that file to media, and you can use the media of your choice.

About Microsoft Management Console

The Microsoft Management Console (MMC) is a built-in feature of Windows that can be used to create, save, and open administrative tools. These tools manage the hardware, software, and network components of your Windows system.

The primary type of tool that you can add to a console is called a snap-in. The Removable Storage Manager (RSM) is an MMC snap-in.

About Removable Storage Manager

Microsoft RSM is a built-in Windows service that tracks removable storage media and manages removable storage devices such as an individual tape drive or tape library. Use RSM to:

- Manage media pools (a way of logically grouping media)
- Physically manipulate media in the removable storage device
- View RSM history and status
- View the location and states of media
- View the status of the removable storage device

RSM works in concert with data management software—for example, it can work with Prinergy Backup software (one of the components of Prinergy Online Backup) to back up data to tape. Prinergy Backup software automatically creates the necessary media pools for managing a backup.

For more information about RSM, see Overview of RSM on page 42 or the RSM Help.

Prinergy Backup Options

Two backup options are available for use with Prinergy:

- Basic Backup
- Prinergy Online Backup

Backup option	Includes...	Does this...
Basic Backup	• Oracle Backup Manager software You must provide and configure your own backup software to save the database backup to media and to back up system drives of primary and secondary servers.	Backs up the Oracle database to a local disk.
Prinergy Online Backup	• Oracle Backup Manager software • Prinergy Backup software	• Oracle Backup Manager backs up the Oracle database to a local disk. • Prinergy Backup software writes the following to tape or to a file on disk: ❒ the backup of the Oracle database ❒ the system drives of primary and secondary servers. **Important:** If you back up to a file on disk, you must subsequently save that file to media. • Prinergy Backup software checks whether the backup was successful.

Developing a Backup Plan

If your system does not include Prinergy Online Backup, you should develop a backup plan in order to safeguard your data and minimize down time in the event of an emergency.

In developing your plan, consider the following questions:

- Which data will you back up?
- What backup schedule will you follow?
- How will you handle and store tapes?

Prinergy Online Backup includes a backup plan for which your system was configured at installation. You only need to consider how you will handle and store tapes.

Deciding Which Data to Back Up

If your system does not include Prinergy Online Backup, you need to decide what data to back up and to configure your backup software accordingly.

The following table describes the Prinergy data that must be backed up onto media in order to recover your system.

Type of server	Essential
Primary server	• Backup of the Oracle database Back up the **BACKUP_DESTINATION** folder and the **ZIP_FILES_DESTINATION** folder. For more information, see *Oracle Backup Manager Backup Parameters* on page 77 and Table 12 on page 78. • Drive that holds Prinergy system files (generally **D**) • Windows system state • Folder that contains the major update uninstall files (generally **E\PrinergyUpdates**)
Secondary server	• Drive that holds Prinergy system files (generally **D**) • Windows system state • Folder that contains the major update uninstall files (generally **E\PrinergyUpdates**)

What Not to Back Up

Do not back up tertiary servers, file servers, or job folders as part of your regular Prinergy backup. Here's why:

- Information stored on these computers is not required for system recovery.
- It could be very time-consuming to back up this information. This could unnecessarily tax your system and reduce productivity.
- Backing up this information—particularly job folders—could use significant media space. This increases the risk of running out of media during backup, which would cause the backup to fail.

  Archive jobs using the Prinergy Archiver system, rather than include them in your backup plan. Archiving jobs saves job information in context and enables you to easily reconstruct a job.

  If you want to back up your jobs, you may be able to use Windows Backup or other third-party software for a separate backup operation. You are responsible for configuring and maintaining this software and associated backups.

In addition, do *not* back up the Oracle database files listed below as part of your system backup. These files are already backed up as part of the Oracle database backup. In addition, some backup software locks files while backing them up, which may create problems within the Oracle database. Do not back up the following folders:

- **<data_drive>\Oracle\oradata\ARAXIDB\ControlFile**
- **<data_drive>\Oracle\oradata\ARAXIDB\OnLineLogFiles**
- **<data_drive>\Oracle\oradata\ARAXIDB\Data**
- **<data_drive>\Oracle\oradata\ARAXIDB\SortSpace**
- **<data_log_drive>\Oracle\oradata\ARAXIDB\MirroredControlFile**
- **<data_log_drive>\Oracle\oradata\ARAXIDB\MirroredOnLineLogFiles**

Planning a Backup Schedule

If your system does not include Prinergy Online Backup, you need to determine a regular schedule for backup.

Back up your system daily to ensure that you have the most up-to-date data in the event of an emergency.

You must decide what time of day you will perform your backup. For example, if you use an individual tape drive and your backup will likely need additional media, you will want to schedule your backup to occur when someone is on-site to insert new media.

Handling and Storing Media

No matter which backup option you use—Basic Backup or Prinergy Online Backup—you must have a strategy in place for handling and storing backup media. This will help ensure that your most recent data is always available in the event of an emergency. Use the following guidelines:

- Clearly label media, using barcodes if available.

  Labeling media helps ensure that you use the correct media, especially if you use one removable storage device for both backup and archiving. Barcodes help automate and simplify the naming process. You may also want to maintain a written record of your barcodes. For more information, see *Labeling Media* on page 49.

- Alternate media each day.

  This prevents wear and tear, and ensures that you have alternate copies of your backup, should a medium be damaged. If you need to restore your system, use the previous day's medium to obtain the most recent data.

  For more information, see *Media Rotation Strategies* on page 69.

- Always use RSM to physically manage media in the device.

  Avoid manually inserting and ejecting media, unless the system prompts you to do so. This enables RSM to accurately track media in your system. For more information about managing media with RSM, see *Managing Media in the Removable Storage Device* on page 54.

- If you use an individual tape drive, be sure to remove your backup medium from the drive at the end of each backup and insert the next day's medium. If the correct medium is not available, your backup may fail.

  If you use a tape library, it is not necessary to remove media each day.

- If you use a tape library with Prinergy Online Backup, ensure that media are available in the **Free** pool, so Prinergy can draw additional media if required. For information about moving media to the **Free** pool, see *Moving Media to the Free Pool* on page 46 or the RSM Help.

- Clean your removable storage device as directed by the manufacturer.

  Keeping your device in good working order may help prevent media damage.

Important: In general, clean a drive only when prompted by RSM. Cleaning a drive too often can produce unnecessary wear and shorten the drive life. For more information about cleaning drives, see Cleaning a Removable Storage Device Drive on page 59.

Media Rotation Strategies

Alternate media each day to save media wear and tear and ensure that you have alternate copies of your backup, should a medium be damaged. If you need to restore your system, use the previous day's medium to obtain the most recent data.

This section describes three possible media rotation strategies for backup:

- Rotate media every other day
- Rotate media weekly
- Rotate media bi-weekly

Important: Backup media must be prepared and allocated before running backup. If you use Prinergy Online Backup, your service representative will help you prepare and allocate backup media.

Rotate Media Every Other Day

In this strategy, you allocate two media to backup, and rotate them every other day.

This strategy is the simplest to maintain but provides the least protection, since there are only two day's worth of backup data available at any given time.

Table 9: Every other day media rotation

Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.
Tape1	Tape2	Tape1	Tape2	Tape1	Tape2	Tape1

Rotate Media Weekly

In this strategy, you allocate a different medium for each day of the week that you run backup. For example, if you run backup every day of the week, you must allocate seven media.

This strategy provides one week's worth of backup data and gives you more protection against data loss than rotating media every other day. However, media management may be more complex, especially if you are using an individual tape drive.

Table 10: Weekly media rotation

Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.
Tape1	Tape2	Tape3	Tape4	Tape5	Tape6	Tape7

Note: There is no guarantee that the first tape will always be used on a Monday, the second tape on a Tuesday, and so on. Therefore, you may want to label media numerically—for example, Tape1, Tape2, and so on—rather than label media by days of the week.

Rotate Media Bi-weekly

In this strategy you allocate a different media for each day of the week that you run backup over a two-week period. For example, if you run backup every day of the week, you must allocate 14 media (twice the number of media required for the weekly media rotation strategy).

This strategy provides two weeks' worth of backup data, giving you additional protection against data loss. (You may also want to take the previous week's media offsite to further safeguard your data.) However, media management may be more complex, especially if you are using an individual tape drive.

Table 11: Bi-weekly media rotation

Week	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.
Week 1, 3, 5...	**Tape1**	**Tape2**	**Tape3**	**Tape4**	**Tape5**	**Tape6**	**Tape7**
Week 2, 4, 6...	**Tape8**	**Tape9**	**Tape10**	**Tape11**	**Tape12**	**Tape13**	**Tape14**

Note: There is no guarantee that the first tape will always be used on a Monday, the second tape on a Tuesday, and so on. Therefore, you may want to label media numerically—for example, Tape1, Tape2, and so on—rather than label media by days of the week.

Using the Basic Backup Option

This section describes Basic Backup option and procedures. Basic Backup provides a means of backing up your Prinergy database to a local disk using Oracle Backup Manager software.

Important: You must provide and configure your own backup software to save the database backup to media and to back up system drives of primary and secondary servers.

Configuring Basic Backup

To configure your system for Basic Backup:

1. Develop a backup plan.

   See Developing a Backup Plan on page 67.

2. Configure Oracle Backup Manager to back up your database to a local disk at a regularly scheduled time, as determined in your backup plan. A service representative will help you configure the Oracle Backup Manager software.

   For more information or to configure the software yourself or change any settings, see Using Oracle Backup Manager on page 77.

3. Connect the removable storage device that you will use for backup.

   You must provide your own device. If you are unsure which devices are compatible with Prinergy, contact your service representative. For information about connecting your device, see the manufacturer's documentation.

4. Install and configure your backup software to automatically write the database backup from the local disk to the removable storage device, and to back up the system drives of your Prinergy servers to media.

   For information about which data to back up, see Deciding Which Data to Back Up on page 67.

Performing a Basic Backup

Once your Prinergy system is configured for backup, your main responsibility is to ensure that the backups are successfully completed as scheduled, and that backup media are handled and stored according to your strategy.

To perform a Basic Backup:

1. Ensure that there is enough media space available in the removable storage device to store the data that is about to be backed up.

   If there is not enough space, the backup will fail.

Tip: If your backup software uses RSM, you may want to assign additional media to the RSM **Free** pool. This enables RSM to draw additional media, should they be required.

2. Insert the new media.

   You may need to insert new media if the data you are trying to back up does not fit on the available media in the device. This is more likely if you use a stand-alone device rather than a tape library.

3. When the backup is finished, store the backup media according to your backup plan.

   If you use an individual tape drive and alternate between two media, you may want to remove media from the device when the backup is finished and insert the next day's medium. If you use a tape library, you may want to store media inside the library.

Using Prinergy Online Backup

This section describes Prinergy Online Backup option and procedures.

Prinergy Online Backup includes:

- Oracle Backup Manager software, which performs a daily backup of the Oracle database to a local disk.
- Prinergy Backup software, which writes the backup of the Oracle database to tape or disk and backs up system drives of the Prinergy primary and secondary servers to tape or disk. See *Backing Up to a File on Disk*, next.

Backing Up to a File on Disk

You can use Prinergy Backup software to back up to a file on disk. The backup file can be created either locally or over the network on another server.

If you back up to a file on disk, you should subsequently back that file up to media. If your company has a corporate backup strategy, you can make the Prinergy backup file available on a server so it is backed up as part of that strategy.

About Prinergy Online Backup

Your system is backed up while Prinergy is running; the system can continue to be used as normal. However, if you run a backup while your system is online and processing jobs, the backup will take longer and Prinergy may be a bit slower processing jobs.

The system also automatically checks that the backup was successful. By default, this check is done eight hours after the backup was launched; your service representative can set this to a different time. You can get current details about backup status from Prinergy Administrator. For more information, see *Performing a Prinergy Online Backup* on page 75 and Prinergy Administrator Help.

Important: The Prinergy Online Backup option cannot be used to back up the RAID or non-Prinergy servers. This means that job data must be archived. Alternately, you can devise a separate backup plan for backing up job data, independent of the system backup.

Configuring Prinergy Online Backup

Your service representative will help you configure your system for Prinergy Online Backup.

In Prinergy Administrator, you can add or remove servers from the list of servers to be backed up. You can add Prinergy secondary servers, render stations, and InSite web servers to the list. You cannot add tertiary servers.

Also in Prinergy Administrator, you can indicate whether you want the servers backed up to tape or to a file on disk. If you back up to a file on disk, you must subsequently save that file to media.

For more information, see Prinergy Administrator Help.

Performing a Prinergy Online Backup

Once your system is configured for backup, your main responsibility is to ensure that the backups are successfully completed as scheduled, and that backup media are handled and stored according to your strategy.

To perform a Prinergy Online Backup:

1. Ensure that the appropriate backup medium is online—that is, the medium designated for use according to your media rotation strategy.

   If you use a tape library, you may also want to ensure that media are available in the **Free** pool. This enables RSM to draw additional media. If not enough media are available, the backup will fail.

2. In Prinergy Administrator, confirm that the backup was successful by performing one of the following steps:

   - Check the backup status box in the bottom-left corner of the Prinergy Administrator window.
   - From the **Tools** menu, select **System Backup** to open a dialog box that lists details about the backup status.

   For more information about monitoring backup status, see Prinergy Administrator Help.

Important: Your system is configured to automatically confirm whether the backup was successful after a specified interval—generally eight hours. Prinergy Administrator displays the correct backup status only after the system completes the confirmation check. If you check backup status before the confirmation check is complete, the information displayed reflects the status of the previous backup.

3. If the backup was not successful, take appropriate measures.

   See What to Do If Backup Fails on page 75.

4. When the backup is complete, store the backup media according to your backup plan.

   If you use an individual tape drive and alternate between two media, you may want to remove the medium from the device when the backup is finished and insert the next day's medium. If you use a tape library, you may want to store media inside the library.

   If you backed up to a file on disk, you must subsequently back up the file to tape.

What to Do If Backup Fails

Monitor your system on a regular basis to ensure that backup is successful, It is essential that you have the most up-to-date backup data available, should you be required to recover your system.

Prinergy Online Backup automatically monitors the system to confirm backup success.

If backup fails:

1. If possible, find out why the backup failed. Backup may fail for a number of reasons, including:
   - Insufficient media
   - Removable storage device not ready
   - Cables disconnected between the device and the server
   - Network problems
2. If you can identify the cause of the failure, take the appropriate steps to prevent future failures, if possible.
3. If you can't identify the cause of failure or the failure persists, contact your service representative.

Using Oracle Backup Manager

This section describes how to use Oracle Backup Manager software. Oracle Backup Manager software backs up the Oracle database to a local disk.

Important: If your system includes the Prinergy Online Backup option, Oracle Backup Manager has already been configured to match your backup plan. Do not change these parameters without consulting your service representative.

Starting Oracle Backup Manager

To start Oracle Backup Manager:

1. On the primary server, from the Windows **Start** menu, select **Run**.
2. In the Run dialog box, type `cmd`, and click **OK**.

   The Command Prompt window appears.
3. Type `ORACLEBACKUPMANAGER`, and press ENTER.

   The **Araxi_OracleMgr>** prompt appears.

Exiting Oracle Backup Manager

To exit Oracle Backup Manager:

- At the **Araxi_OracleMgr>** prompt, type `exit`, and press ENTER.

  Oracle Backup Manager exits.

Oracle Backup Manager Backup Parameters

You can view the Oracle Backup Manager backup parameters in a Command Prompt window. Table 12 describes the parameters. See also *Viewing Backup Parameters* on page 79.

Items marked with an asterisk (*) can be edited using the **Alter** command in Oracle Backup Manager. For more information, see *Editing Backup Parameters* on page 81.

Unless otherwise indicated, typed commands in Oracle Backup Manager are not case-sensitive. In this document, commands are shown in uppercase letters to aid readability.

Table 12: Oracle Backup Manager backup parameters

Backup parameter	Identifies...	Recommended setting
*FULL_BACKUP_INTERVAL	Number of days between full backups of the database	Set to **0**. This means the database is backed up daily.
*BACKUP_START_HOUR	Time of day that a scheduled backup should start, with a possible value between 0 and 22:00 hours	The default setting is **3** (3 a.m.). Base your setting on: ▪ The least busy production time ▪ The hours that personnel are on-site if tape must be manually changed during backup. **Note:** The value **23** (11 p.m.) is not available, as this time is reserved for the Oracle Backup Manager scheduler.
*INCR_BACKUP_INTERVAL	Number of days between incremental database backups	Always set to **0**. **Note:** Incremental backups are not recommended.
*BACKUP_SUCCESS_COMMAND_WARNING	Number of seconds to wait for **BACKUP_SUCCESS_FILE** before generating a warning	The default is **3600** seconds (1 hour). Change as desired.
*SHUTDOWN_TO_BACKUP	Whether Prinergy will shut down when doing a backup of the database (**YES** or **NO**)	**NO**
* BACKUP_DESTINATION	Initial destination for the Oracle database backup files **Note:** This folder is typically empty after a database backup. The database backup files are removed from this folder after a zip file containing the database backup files is successfully created in ZIP_FILES_DESTINATION. If you are using the Basic Backup option, back up both the BACKUP_DESTINATION and ZIP_FILES_DESTINATION folders, if they are separate folders.	**<data_log_drive>:\ORACLEBACKUP** The backup files can be put on the RAID if there is not enough space on the E: drive.

Backup parameter	Identifies...	Recommended setting
* ZIP_FILES_DESTINATION	Location of zip file containing database backup files. This is the final destination of the Oracle database backup files.	**<data_log_drive>\ORACLEBACKUP**
BACKUP_SUCCESS_COMMAND_FILE	Command file executed when the database backup is successfully completed. For example, the command file may copy the database backup to tape.	**<system_drive>:\<OracleFolder>\Creo\Util\SuccessfulBackup.cmd**
ORACLE_ARCHIVEMODE	Identifies the Oracle database log mode	**ARCHIVELOG**
ORACLE_SID	Identifies the Oracle instance being backed up. There is only one instance in Prinergy.	**CREO**
BACKUP_FAILURE_COMMAND_FILE	Command file executed when the backup fails. For example, the command file may send an e-mail notice to the backup administrator.	**<data_log_drive>:\<OracleFolder>\Creo\UtilUnSuccessfulBackup.cmd**
BACKUP_LOG_FILE	Location of the backup log file, which tracks all backup activity	**<data_log_drive>:\<OracleFolder>\Creo\Logs\OracleBackupLogFile.log**

Viewing Backup Parameters

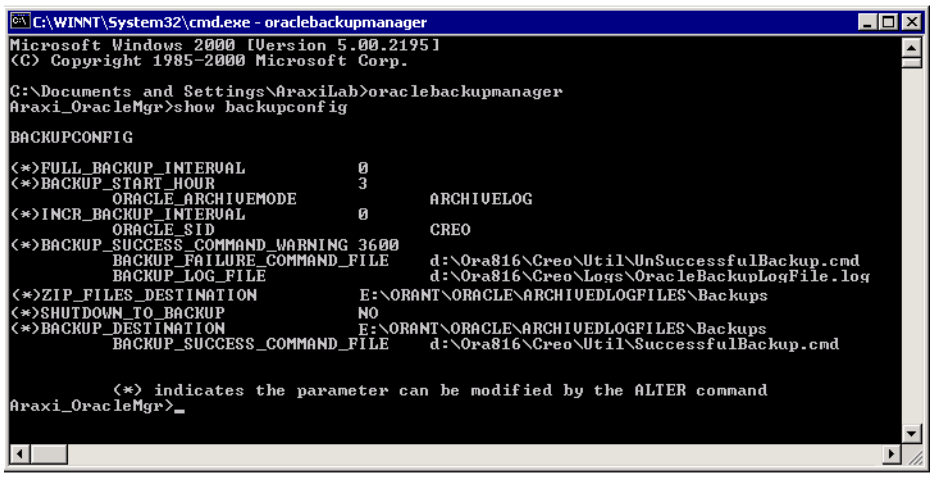
To view Oracle Backup Manager backup parameters:

1. On the primary server, from the Windows **Start** menu, select **Run**.
2. In the Run dialog box, type `cmd`, and click **OK**.

   The Command Prompt window appears.
3. Type `ORACLEBACKUPMANAGER`, and press ENTER.

   The **Araxi_OracleMgr>** prompt appears.
4. Type `SHOW BACKUPCONFIG`, and press ENTER.

   The current Oracle Backup Manager backup parameters appear.


C:\WINNT\System32\cmd.exe - oraclebackupmanager
Microsoft Windows 2000 [Version 5.00.2195]
(C) Copyright 1985-2000 Microsoft Corp.
C:\Documents and Settings\AraxiLab>oraclebackupmanager
Araxi_OracleMgr>show backupconfig
BACKUPCONFIG
(*)FULL_BACKUP_INTERVAL 0
(*)BACKUP_START_HOUR 3
ORACLE_ARCHIVEMODE ARCHIVELOG
(*)INCR_BACKUP_INTERVAL 0
ORACLE_SID CREO
(*)BACKUP_SUCCESS_COMMAND_WARNING 3600
BACKUP_FAILURE_COMMAND_FILE d:\Ora816\Creo\Util\UnSuccessfulBackup.cmd
BACKUP_LOG_FILE d:\Ora816\Creo\Logs\OracleBackupLogFile.log
(*)ZIP_FILES_DESTINATION E:\ORANT\ORACLE\ARCHIVEDLOGFILES\Backups
(*)SHUTDOWN_TO_BACKUP NO
(*)BACKUP_DESTINATION E:\ORANT\ORACLE\ARCHIVEDLOGFILES\Backups
BACKUP_SUCCESS_COMMAND_FILE d:\Ora816\Creo\Util\SuccessfulBackup.cmd
(*) indicates the parameter can be modified by the ALTER command
Araxi_OracleMgr>

Editing Backup Parameters

Use the **Alter** command in Oracle Backup Manager to specify backup parameters according to your backup plan.

Table 12 on page 78 lists editable parameters and recommended settings. Editable parameters are marked with an asterisk.

Important: If your system includes the Prinergy Online Backup option, Oracle Backup Manager has already been configured to match your backup plan. Do not change these parameters without consulting your service representative.

To edit backup parameters:

1. On the primary server, from the Windows **Start** menu, select **Run**.
2. In the Run dialog box, type `cmd`, and click **OK**.

   The Command Prompt window appears.
3. Type `ORACLEBACKUPMANAGER`, and press ENTER.

   The **Araxi_OracleMgr>** prompt appears.
4. To edit a backup setting, type:

   `ALTER <BACKUP SETTING> = <NEW VALUE>`, and press ENTER.

   Important: You must type spaces exactly as shown. For example, `ALTER BACKUP_START_HOUR = 3` **(to schedule backup to start at 3 a.m.).**

Backing Up the Database on Request

You can perform a full backup of the database on request.

To back up the database on request:

1. On the primary server, from the Windows **Start** menu, select **Run**.
2. In the Run dialog box, type `cmd`, and click **OK**.

   The Command Prompt window appears.
3. Type `ORACLEBACKUPMANAGER`, and press ENTER.

   The **Araxi_OracleMgr>** prompt appears.
4. Type `BACKUP DATABASE`, and press ENTER.

   Oracle Backup Manager does a full backup of the database. If you are using the Prinergy Online Backup option, it also triggers the system backup.

Starting and Stopping the Oracle Backup Manager Scheduler

You can start or stop the Oracle Backup Manager scheduler. The Oracle Backup Manager scheduler automatically starts each time Prinergy is started.

By default, the Oracle Backup Manager scheduler runs each night at 23:00 hours to determine the backup requirements, and then schedules the backup to start at the time specified under **BACKUP_START_HOUR**.

You can change the time that the backup starts. For more information, see *Editing Backup Parameters* on page 81.

To start or stop the Oracle Backup Manager scheduler:

1. On the primary server, from the Windows **Start** menu, select **Run**.
2. In the Run dialog box, type `cmd`, and click **OK**.

   The Command Prompt window appears.
3. Type `ORACLEBACKUPMANAGER`, and press ENTER.

   The **Araxi_OracleMgr>** prompt appears.
4. Perform one of the following steps:
   - To stop the Oracle Backup Manager scheduler, type `BACKUP STOP`.
   - To start the Oracle Backup Manager scheduler, type `BACKUP START`.
5. Press ENTER.

Viewing Backup History

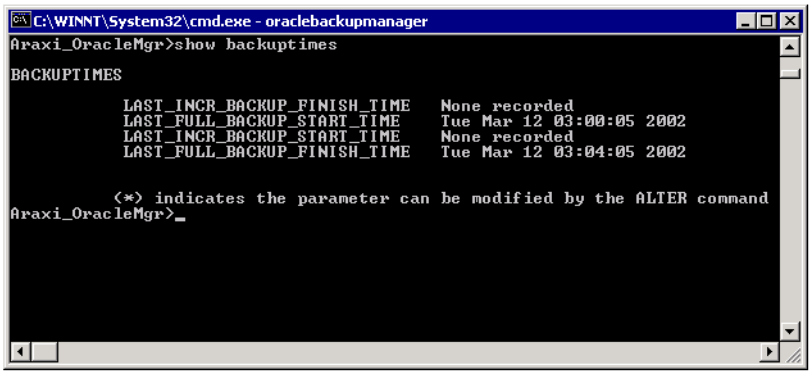
To view the backup history:

1. On the primary server, from the Windows **Start** menu, select **Run**.
2. In the Run dialog box, type `cmd`, and click **OK**.

   The Command Prompt window appears.
3. Type `ORACLEBACKUPMANAGER`, and press ENTER.

   The **Araxi_OracleMgr>** prompt appears.
4. Type `SHOW BACKUPTIMES`, and press ENTER.

   Oracle Backup Manager displays the start and finish times for the last full and incremental backups.



Oracle Backup Manager Quick Reference Table

To...	Do this...
Start Oracle Backup Manager	In the Windows Command prompt, type `ORACLEBACKUPMANAGER`, and press ENTER.
View backup history and Oracle Backup Manager parameters	At the **Araxi_OracleMgr>** prompt, type `SHOW`, and press ENTER.
View backup history	At the **Araxi_OracleMgr>** prompt, type `SHOW BACKUPTIMES`, and press ENTER.
View Oracle Backup Manager parameters	At the **Araxi_OracleMgr>** prompt, type `SHOW BACKUPCONFIG`, and press ENTER.
Set the days between full backups	At the **Araxi_OracleMgr>** prompt, type `ALTER FULL_BACKUP_INTERVAL = <number of days>`, and press ENTER.
Set the backup start hour	At the **Araxi_OracleMgr>** prompt, type `ALTER BACKUP_START_HOUR = <numeric value between 0 - 22 hrs>`, and press ENTER.
Set the days between incremental backups	At the **Araxi_OracleMgr>** prompt, type `ALTER INCR_BACKUP_INTERVAL = <number of days>`, and press ENTER.
Set the number of seconds to wait for **BACKUP_SUCCESS_FILE** before generating warning	At the **Araxi_OracleMgr>** prompt, type `ALTER BACKUP_SUCCESS_COMMAND_WARNING = <number of seconds>, and` press ENTER.
Set Prinergy to shut down during backup	At the **Araxi_OracleMgr>** prompt, type `ALTER SHUTDOWN_TO_BACKUP = <YES or NO>, and` press ENTER.
Set the destination for the Oracle database backup	At the **Araxi_OracleMgr>** prompt, type `ALTER BACKUP_DESTINATION = <path, e.g. E:\ORACLEBACKUP>, and` press ENTER.
Set the destination for the zip file of the Oracle database backup	At the **Araxi_OracleMgr>** prompt, type `ALTER ZIP_FILES_DESTINATION = <path, e.g. E:\ORACLEBACKUP>`, and press ENTER.
Manually perform a full backup of the Oracle database	At the **Araxi_OracleMgr>** prompt, type `BACKUP DATABASE`, and press ENTER.
Start the Oracle Backup Manager scheduler	At the **Araxi_OracleMgr>** prompt, type `BACKUP START`, and press ENTER.
Stop the Oracle Backup Manager scheduler	At the **Araxi_OracleMgr>** prompt, type `BACKUP STOP, and` press ENTER.
Exit Oracle Backup Manager	At the **Araxi_OracleMgr>** prompt, type `EXIT, and` press ENTER.

Glossary

add a JTP — To activate or enable a JTP on a particular server, using Prinergy Administrator. A JTP cannot be used by the system unless it is added to one or more servers. See also *remove a JTP*.

administrator privileges — A level of Windows privileges that enables a user to set up and manage user and group accounts, assign passwords and permissions, and use Windows administrative tools. Administrator privileges can be associated with the Administrator user or a member of the Administrators group.

Adobe Extreme — A high-end production-printing architecture that provides some of the core technology for Prinergy.

AIT — Advanced Intelligent Tape. AIT is one of the tape technologies supported by the Prinergy Archiver. The only other tape technology supported by the Archiver is DLT.

archiving station — A secondary server that is running Archiver software and is connected directly to the archiving device.

calibration curve — A curve that graphically represents the percentage at which to adjust an original PostScript tint during screening to produce the target output. You can edit calibration curves in Harmony software.

client/server architecture — A software environment in which client software (such as Prinergy Workshop) makes a request of server software (such as Prinergy Server). The server software initiates the requested service, and then sends the relevant information to the client software.

color match (verb) — To keep color consistency when converting one color space to another—for example, from RGB to CMYK. Prinergy uses ICC profiles to map to L*a*b, a device-independent color space. An ICC target is used to map to a device space when a file is ready for output. This maintains color consistency between the color model and output devices.

CORBA — Common Object Request Broker Architecture. CORBA is platform- and hardware-independent and allows applications to communicate with one another, regardless of where they are located or who designed them. Prinergy uses CORBA for some internal communications.

CT/LW — A file format where contone images (CT) are separated from the line work (LW). A third file (called the layout file) is used to position the CT images within the linework.

daemon — A software process on a server that runs behind the scenes to perform specific tasks.

destroy — To permanently delete a job and all references to it from the Prinergy system. Compare to *purge*.

digital master A PDF file created by Prinergy is a digital master because it is a complete, reliable entity. Only page description information is contained in the PDF page. Proofs, films, or plates are made from the same PDF file by selecting the appropriate output process template.

disk partition A portion of a physical disk that functions as though it were a physically separate unit.

distributed system A system in which software processing is performed on several different computers to distribute the workload. Prinergy is a distributed system.

DLT Digital Linear Tape. DLT is one of the tape technologies supported by the Prinergy Archiver.

domain A collection of computers and users that share a common database and security policy, which are stored on a domain controller. Compare to *workgroup*.

domain controller In a Windows Server domain, a computer running Windows Server that authenticates domain logons and maintains a directory database for a domain. The domain controller tracks changes made to accounts of all computers on a domain.

Encapsulated PostScript (EPS) EPS is a subset of the PostScript language. It describes images in a format that can be imported into other documents.

EPS file Encapsulated PostScript file. EPS files are used to describe a graphic image using PostScript language.

Extreme See *Adobe Extreme*.

file server A computer that is connected to the Prinergy system via the network, but is not running Prinergy software. It is used to store input files for Prinergy jobs.

home server The job server for a particular Prinergy job. When you create a job, you must select a job server on which to store the job.

hot folder A file that is monitored for incoming files as a trigger for an automatic operation. The application that processes the files checks the folder location on a regular basis, and automatically processes any files found there.

imposition A means of arranging a number of pages on the front and back of a press sheet to ensure correct order after the printed sheet is folded.

input file A file that contains page content. For example, a file that is created by printing a customer's source file, such as a QuarkXPress file, to a PostScript file.

Java A platform-independent programming language developed by Sun Microsystems.

job The unit used to organize work. A job typically, but not necessarily, corresponds to all the components of one publication.

job folder A folder (or directory) on a Prinergy server that stores all the system files for a job. In addition, the job folder may include any input files from your customer.

job metadata Information about job data (content).

job server A Prinergy server on which job folders are stored. See also *home server.*

job ticket In Adobe Extreme, a collection of information related to one or more processing steps that must be carried out in Prinergy. It includes a map or route that specifies which JTPs to go to and in what order. It can also include information about which files to process, processing options, destinations, and imposition plans.

job ticket processor (JTP) Software that performs a specific task to help process an Extreme job ticket. Configure JTPs using Prinergy Administrator.

JTP pool One or more similar JTPs that have been grouped together to further automate the Prinergy workflow. A JTP pool lets you direct Prinergy to automatically distribute tasks to individual JTPs, so you don't have to manually coordinate which JTP to use. This helps you automatically process multiple jobs at the same time.

loose page proof The output of a refined page or pages to a proofer (for example, a laser printer or color copier), or to Virtual Proofing System.

Macintosh-accessible volume Storage space on a server used for folders and files of Macintosh users. A Macintosh-accessible volume is equivalent to a shared directory for Windows users.

middleware Software that is used as a subcomponent to tie other software together.

multicast Communication between a single sender and multiple receivers on a network.

normalize A step in the refining process that creates PDF pages from input files. The resulting PDF files contain refined pages. Options in the normalize process are: OPI, image optimization, and font handling.

optimize The process of checking and optimizing resources in PDF files. It optimizes the PDF to create a predictable digital master. Processing is done by the Optimizer JTP (a generic JTP).

Orbacus An implementation of CORBA. It is part of Prinergy's internal communications structure.

PDF Portable Document Format. PDF is a reliable file format for storing line art, images, and text (including all required fonts) for pages. PDF files do not contain device-specific settings such as imaging resolution or duplex options.

Portable Job Ticket Format (PJTF) Adobe's Portable Job Ticket Format (PJTF) contains descriptions of device-specific settings and describes the desired output style for one or more pages from PDF files. See also *job ticket.*

PostScript A page description language developed by Adobe Systems. It is used to describe type and visual elements so that they can be output on devices with PostScript interpreters.

PostScript file A file written in the PostScript page description language and created by a native application.

PPD file A file that contains information about an output device, such as plate size, resolution, line screen, and screen angle. A PPD file is generated by output device control software, such as Print Console. It is used by imposition software, such as Preps, when generating imposition plans. See also *PPX file*.

PPX file A supplement to a PPD file.

primary server The main server in a Prinergy system. It contains all Prinergy Server components, including the Oracle database.

Prinergy workstation A computer that is running Prinergy Workshop; it is not running any Prinergy Server components. It can also be called a client computer.

process template A file containing a collection of options and parameters that tell Prinergy how to perform a task. Because settings are predefined, using process templates provides consistent results. Process templates are created using the Process Template Editor.

purge To delete selected job files from a Prinergy server; however, the job remains on the system because job metadata is retained in the Oracle database. Purging is done after a job has been successfully archived. Compare to *destroy.* See also *archive (verb)* and *retrieve*.

RAID Redundant Array of Independent (or Inexpensive) Disks. A category of disk drives that employ two or more drives in combination for fault tolerance and performance.

remove a JTP To disable or deactivate a JTP on a particular server, using Prinergy Administrator. See also *add a JTP*.

render station A secondary server that is connected to an output device and is running a high-resolution renderer JTP.

renderer The software component that rasterizes and screens PDF input files.

retrieve To bring back to the Prinergy system files that were previously archived to media. In Prinergy, retrieving instructions are set in the retrieve process template. See also *archive* and *purge*.

RIP Raster image processor. Software that converts PostScript data into raster (bitmap) data. The PDF workflow, as it is applied in Prinergy, utilizes a two-phase RIP process. Interpretation occurs as part of the refine process when the input file is normalized to PDF. Rendering, which converts the PDF file to raster data, happens as part of the output process.

secondary server A Prinergy server that runs Prinergy Server software but does not store the database. See also *render station* and *archiving station*.

share In Windows, a share is any resource on a server that is available to network users. A standard share is a share created automatically by Prinergy when it is installed—for example, a job storage folders.

software process (Prinergy) A Prinergy Server software component that performs a specific task, including daemons, JTPs, and Araxi Service.

strong password A password that is not easily guessed or broken. Strong passwords generally combine uppercase and lowercase characters, are at least 8 characters long, and include numerals and special characters.

tertiary server A server that is connected to the Prinergy system via the network, but is not running Prinergy Server software. It is used to store job folders and/or input files for Prinergy jobs.

trap (verb) To overlap adjacent printed colors slightly to ensure that white space does not appear between the colors. Trapping parameters can be specified in the original application or in the refine process template.

volume A partition or collection of partitions that are formatted for use by a file system. See also *Macintosh-accessible volume*.

workgroup A collection of computers that are grouped for sharing resources such as data and devices. In terms of networking, there is no dedicated server or hierarchy among computers. Compare to *domain*.

Index

A

adding
  output devicies, 20
  proofing devicies, 20
Adobe Extreme architecture, 3
AIT tape, 22, 30
  See also archiving media *and* backup media
Apple Macintosh computers, 20
application pools
  creating, 46
  described, 44
  media pools, 43
Araxi Service, 7
Araxi services, 20
archive JTPs, 26
Archive/Retrieve JTP, 26
Archiver Daemon, 26
Archiver software. *See* Prinergy Archiver software
Archiver system. *See* Prinergy Archiver system
archives
  described, 22
  organizing, 36
  planning, 36
  storing, 37
  vs. backup, 22
archiving devices
  individual tape drive, 27
  managing media in, 54
  sharing with backup, 28
  tape library, 28, 64
archiving job data
  described, 22
  process, 32
archiving media
  handling, 49
  how RSM identifies, 43
  labeling, 49
  managing in the device, 51
  moving to Free pool, 46
  viewing location of, 51
archiving software, 24
archiving station, 24
archiving strategy
  developing, 36
  frequency of archiving, 36
  organizing archives, 36
  sample scenarios, 37
  storing media, 37
  which jobs to archive, 36
archiving vs. backup, 22

B

backing up
  a RAID, 74
  the Oracle database, 81
  to a file on disk, 74
  using a basic backup, 72
  using Prinergy Online Backup, 75
backup
  confirming successful, 74, 75
  described, 62
  failure of, 75
  history, viewing, 82
  media rotation strategies
    bi-weekly, 70
    every other day, 70
    weekly, 70
  monitoring status, 75
  sharing removable storage device with archiving, 28
  to disk, 74
  using a basic backup, 72
  using Prinergy Online Backup, 75
  viewing history, 82
  what not to back up, 68
backup copies of archives, 34
backup destination, setting, 78
backup failure, 75
backup history, viewing, 82
backup media
  described, 64
  handling, 69
  storing, 69
backup settings, Oracle Backup Manager
  described, 77
  editing, 81
  quick reference table, 83
  viewing, 79
backup status, monitoring, 75
backup strategy, 74
  developing, 67
  planning a schedule, 68
  what not to backup, 68
  what to back up, 67
backup vs. archiving, 22
Backup, Basic, configuring, 72
backup, database, setting parameters, 81
barcode system for labeling media
  advantages of, 50
  described, 49
  labeling strategies, 49
  using with backup, 69
Basic Backup
  configuring, 72
  performing, 72
bi-weekly media rotation for backup, 70

C

cleaning media, 59
client computers, 12
client/server architecture, 4
confirming successful backup, 74, 75
copies of archives, creating, 34
copying archives, 27
  See also multiple pools
copying jobs on a medium, 27
CORBA, 5
corporate backup strategy, 74

D

daemons, 7
data that shouldn't be backed up, 68
database backup, setting destination, 78
database. *See* Oracle database
details pane information
  Library > Drives, 53
  Off-line Media & Library > Media, 52
disaster recovery, 23, 62
disk failure, 62
disk partition, 23, 62
Disk Purge JTP, 26
disk, backing up to, 74
distributed architecture
  advantages of, 10
distributed system, example of, 11
distributing
  input files, 10
  jobs, 10
  JTPs, 10
DLT tape, 22, 30
  See also archiving media *and* backup media
DLT tape library, 27
  See also tape library
drive cleaning
  about, 59
  backup and, 69

E

editing Oracle Backup Manager settings, 81
enabling
  Prinergy Archiver system, 31
Extreme architecture, 3

F

failure, backup, 75
file formats
  internal Prinergy format, 3
  supported input, 3

supported output, 3
file servers
and input files, 10
defined, 9
file-sharing protocols, 20
folders, job, 20
Free pool
assigning media new to the system, 43
described, 43
moving media to, 46

H

handling archiving media
labeling, 49
safe handling, 50
handling backup tapes, 69
history entries, 20
home server, 6, 10

I

identifying media, 43
Import pool, 43, 44
individual tape drive, 27, 64
input files
description, 6
distributing, 10
location, 6
input volumes, 20
InSite, described, 2
inventory of removable storage device, updating, 53
IONA Technology, 5

J

Java Runtime Environment (JRE), 12
Java Virtual Machine (VM), 12
job folders, 6
managing, 20
job home, 10
job ticket, 3
Job Ticket Processor. *See* JTPs
job volumes, 20
jobs
archiving, 32
components of, 6
described, 6
distributing, 10
home server, 6
purging, 32
retrieving, 32
JTP pools, 20
JTPs, 7
configuring, 20
described, 4
distributing, 10
jukebox. *See* tape library

L

labeling archiving media
barcode system, 50
strategies, 49
licenses, managing, 20
Link, described, 2
LTO tape, 22
See also archiving media *and* backup media

M

Macintosh computers, 20
managing
Araxi services, 20
archiving media
in device, 54
updating inventory, 53
history entries, 20
input volumes, 20
job folders, 20
job volumes, 20
licenses, 20
media pools
Free pool, moving media to, 46
quick reference table, 47
servers, 20
user rights, 20
managing archiving media
managing media pools
master PDF files, 6
Media Manager, 26, 58
media pools
application pool, 44, 46
described, 43
Free pool, 43
Import pool, 44
managing, 46, 64
system pools, 43
Unrecognized pool, 44
media rotation strategies for backup
bi-weekly, 70
every other day, 70
weekly, 70
media state definitions, 53
media, viewing information about, 26
Medium Logical Copy, 27
Medium Verify, 27
Microsoft Management Console. *See* MMC (Microsoft Management Console)
Microsoft Tape Format (MTF), 30
middleware, 5
MMC (Microsoft Management Console)
about, 24, 64
and archiving, 24
and backup, 64
snap-ins, 24
monitoring
Archiver system, 57
backup status, 75
operator requests, 56
monitoring processes, 20
MTF (Microsoft Tape Format), 30
multiple pools, archiving to, 34

N

new features in Prinergy 2.2, 74
normalize, 3

O

Object Request Broker (ORB), 5
Operator Requests in RSM, 42
operator requests, monitoring
as prompt messages, 56
in Prinergy Workshop, 56
in RSM, 56
introduction, 56
Oracle Backup Manager, 7
exiting, 77
quick reference table, 83
settings
editing, 81
overview, 77
viewing, 79
starting, 77
starting and stopping the scheduler, 82
viewing backup history, 82
Oracle database, 6, 7
backing up on request, 81
Orbacus, 5
OrbacusWeb, 5
Orbix, 5
organizing archives, 36
output devices, adding, 20
overview
Archiver system, using, 32
backup, 62
Prinergy, 2

P

PDF, 3
Prinergy internal file format, 6
Physical Locations in RSM
described, 42
viewing, 51
PJTF, 4
pool, media
application pool, 44
described, 43
Free pool, 43
Import pool, 44
managing, 43
system pool, 43
types of, 43
Unrecognized pool, 44
Portable Document Format. *See* PDF
Portable Job Ticket Format, 4

power outages, 62
preferences, 20
Preps, described, 2
primary server, 9
  Prinergy Workshop, 12
  what to back up, 67
Prinergy
  architectural concepts, 3
  described, 2
Prinergy 2.2, new features in, 74
Prinergy Administrator
  described, 8
  location, 7
Prinergy Archiver software
  Archive/Retrieve JTP, 26
  Disk Purge JTP, 26
  MMC, 24
  RSM, 25, 64
Prinergy Archiver system
  components of, 24
  enabling, 31
  main tasks, 22
  monitoring, 57
  using, overview, 32
  viewing Work Queue, 57
Prinergy backup system components
  backup media, 64
  MMC, 64
  overview, 63
  removable storage devices, 63
  RSM, 64
Prinergy Connect, described, 2
Prinergy Direct, described, 2
Prinergy family, 2
Prinergy Online Backup, 74, 75
Prinergy Powerpack, described, 2
Prinergy Publish, described, 2
Prinergy Server, 4
  starting, 15
  stopping, 17
Prinergy Server software
  components, 7
Prinergy system
  shutting down, 15
  starting, 14
Prinergy Workshop, 12
  language, 12
  Media Manager, 26
  monitoring operator requests, 56
  resources, 12
processes, monitoring, 20
product family, 2
proofing devices
  adding, 20
protocols, file-sharing, 20
purging job data
  archived to multiple pools, 34
  described, 22
  process, 32

Q

queue. *See* Work Queue
quick reference table
  media pool commands, 47
  Oracle Backup Manager, 83

R

RAID, 14, 15
rasterizing, 3
read/write errors in storage device drives, 59
redundant copies of archives, creating, 34
removable storage device
  cleaning a drive, 59
  described, 27
  for archiving, 27
  for backup, 63
  sharing with archiving and backup, 28
  updating inventory of, 53
Removable Storage Manager, 25
  See also RSM
removable storage media, viewing information about, 26
retrieving job data, 22, 32
rights, user, 20
rotating backup media
  bi-weekly, 70
  every other day, 70
  weekly, 70
RSM
  and archiving, 25
  and backup, 64
  archiving device, 27
  components, 42
  described, 25, 64
  identifying media, 43
  sharing removable storage devices, 25
  starting, 42
Rules-Based Automation, 20

S

schedule, planning backup, 68
scheduler, Oracle Backup Manager, starting and stopping, 82
secondary servers, 9
  Prinergy Workshop, 12
  what to back up on, 67
servers
  distributing jobs, 10
  distributing JTPs, 10
  managing, 20
  types in Prinergy system, 9
sharing files with Apple Macintosh computers, 20
sharing removable storage devices, 25
shutting down
  Prinergy system, 15
  See stopping
slow processing during backup, 74
snap-ins, 24
stand-alone tape drive. *See* individual tape drive
starting
  Prinergy Server, 15
  Prinergy system, 14
starting and stopping Oracle Backup Manager scheduler, 82
stopping
  Prinergy Server, 17
  See shutting down
storage device, removable
  archiving, described, 27
  backup, described, 63
  sharing with archiving and backup, 28
  using multiple devices, 28
storing
  archiving media, 37
  backup tapes, 69
strategy
  archiving, 36
  backup, 67
successful backup, confirming, 74, 75
Sun Java language, 12
system components
  Prinergy Archiver, 24
system files, 6
system pools
  described, 43
  Free pool, 43
  Import pool, 44
  Unrecognized pool, 44
System subfolder, 6

T

tape library, 28, 64
TCP/IP, 5
tertiary servers, 9
thumbnails, 6

U

Unrecognized pool, 43
updating inventory of a removable storage device, 53
UPS, 14, 15
user rights, 20
UserDefinedFolders folder, 6

V

verifying a medium, 27
virus infections, 62

W

Waiting for operator intervention icon, 33, 56
weekly media rotation, backup, 70
Work Queue
    details pane columns, 57
    in RSM, 42
    task state descriptions, 57
    viewing, 57

Z

zip files destination, setting, 79

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