

# RPMS Database Backup and Files

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# Objectives (1)

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Hardware Configuration Recommendation

RPMS Database Directories

Database

CACHE.DAT

Healthshare

Create New Database

# Objectives (2)

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Local Databases

Database Properties

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# Objectives (3)

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Scheduling a Database Backup

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Journal Settings

Healthshare Shutdown

Create Backup Files

# Hardware Configuration Recommendations

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Windows 2016 (OIT Tested/Approved)

AIX 7.2 (OIT Tested/Approved)

Software Type and Edition (Healthshare –OIT Tested/Approved)

Range of Supported Concurrent Users

Processor Requirement

Memory Requirement

Storage Requirement

**Technical Document:** *Hardware Configuration Recommendations*

# RPMS Directory Configuration - Windows

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Separating system files by directory safeguards the file

Directories:

- C: OS/System files (Minimum 200GB)
- D: Healthshare (Installation) (Minimum 200GB)
- E: RPMS Production (live database) (Minimum 500 GB free space)
- F: RPMS databases (AGMPI,BUSA,eRX,BMW, etc.) (Minimum 500GB free space)
- G: RPMS pub (application/system files, etc.) (Minimum 300 GB)
- H: RPMS backup (Minimum 300 GB) Adjust according to the number backups to maintain.
- I: RPMS Journal file (Minimum 50 GB) Adjust according to the number journal files to maintain.
- J: RPMS WIJ file (Minimum 50GB)

# RPMS Directory Configuration - AIX

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Separating system files by directory safeguards the file

Directories:

- `usr/` OS/System files (Minimum 200GB)
- `usr2/` Healthshare (Installation) (Minimum 200GB)
- `usr3/` RPMS Production (live database) (Minimum 500 GB free space)
- `usr4/` RPMS databases (AGMPI,BUSA,eRX,BMW, etc.) (Minimum 500GB free space)
- `usr5/` RPMS pub (application/system files, etc.) (Minimum 300GB)
- `usr6/` RPMS backups (Minimum 300GB) Adjust according to the number backups to maintain.
- `usr7/` RPMS Journal files (Minimum 50GB) Adjust according to the number journal files to maintain.
- `usr8/` RPMS WIJ file (Minimum 50GB)

# RPMS Database Directories

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**CACHE.DAT** files reside in each directory for each system

Name	Date modified
AGMPIDEHR	3/16/2023 10:33 AM
BMW	3/16/2023 10:33 AM
BUSADEHR	3/16/2023 10:33 AM
C32DEHR	5/18/2022 10:35 AM
CCDADEHR	3/16/2023 10:33 AM
DEHR	3/16/2023 10:33 AM
DEHRNJ	3/16/2023 10:33 AM
ENSDEHR	3/16/2023 10:33 AM
ERXDEHR	9/16/2021 3:39 PM
PHR	3/16/2023 10:33 AM

## Directory settings

- Supports database growth
- Write access



# Database

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A CACHE.DAT file

Configure using the Management Portal

Create a local database name

A namespace is pointed to a database

Option to mount databases for read-only use

Enable or disable journaling

Option to Encrypt (highly recommended)



# CACHE.DAT

---

All databases appear as CACHE.DAT

Do not attempt to open this file (corruption may occur)

Configure the database using the Management Portal to access it

Name	Date modified	Type	Size
 stream	10/9/2018 9:34 AM	File folder	
 CACHE.DAT	12/7/2022 8:40 AM	DAT File	9,915,392 KB

# Healthshare

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1. Create and configure the Database
2. Database Properties
3. Namespace
  - Global mappings
  - Routine mappings
  - Package mappings
4. Database Backup List
5. Backup task schedules

# Create New Database

System Administration | Configuration | System Configuration | Local Databases

The screenshot shows the 'Local Databases' configuration page. At the top, there is a breadcrumb trail: 'System > Configuration > Local Databases'. Below this, there are several status indicators: 'Server: HQ', 'User:', 'Namespace: %SYS', 'Licensed to: OIT-DEHR', and 'Instance: HEALTHSHARE'. A 'Refresh' button is set to 'off' with a 10-second interval. A 'Create New Database' button is highlighted with a blue arrow pointing to the 'Database Wizard' dialog box. The wizard has a title bar with a cube icon and the text 'Database Wizard'. The main content area says 'This wizard will help you create a new database.' Below this, there are two input fields: 'Enter the name of your database' with the value 'DEHR' and 'Database directory' with the value 'F:\DATABASE\DEHR\'. Both fields are marked as 'Required'. At the bottom of the wizard, there are buttons for 'Back', 'Next', 'Finish', 'Cancel', and 'Help'.

The name needs to be consistent

**DEHR** database

**DEHR** namespace

**First:** Create a database

**Second:** Create a namespace. The namespace will be pointed to the database.

By default a **CACHE.DAT** will be created in the directory: **F:\DATABASE\DEHR**

The RPMS production database can be copied into the directory, the system will state there is an existing database

# Local Databases

The following is a list of the local databases:

Name	Directory	Size (MB)	Status	Resource	Encrypted	Journal		
<a href="#">CACHESYS</a>	d:\intersystems\healthshare\mgr\	170	Mounted/RW	%DB_CACHESYS	No	Yes	-	<a href="#">Globals</a>
<a href="#">CACHELIB</a>	d:\intersystems\healthshare\mgr\cachelib\	500	Mounted/R	%DB_CACHELIB	No	No	-	<a href="#">Globals</a>
<a href="#">CACHETEMP</a>	d:\intersystems\healthshare\mgr\cachetemp\	240	Mounted/RW	%DB_CACHETEMP	Yes	No	-	<a href="#">Globals</a>
<a href="#">CACHE</a>	d:\intersystems\healthshare\mgr\cache\	11	Mounted/RW	%DB_CACHE	Yes	No	-	<a href="#">Globals</a>
<a href="#">CACHEAUDIT</a>	d:\intersystems\healthshare\mgr\cacheaudit\	11	Mounted/RW	%DB_CACHEAUDIT	Yes	Yes	-	<a href="#">Globals</a>
<a href="#">AGMPIDEHR</a>	f:\database\agmpidehr\	102	Mounted/RW	%DB_%DEFAULT	Yes	Yes	<a href="#">Delete</a>	<a href="#">Globals</a>
<a href="#">BMW</a>	f:\database\bmw\	6096	Mounted/R	%DB_%DEFAULT	No	No	<a href="#">Delete</a>	<a href="#">Globals</a>
<a href="#">BUSADEHR</a>	f:\database\busadehr\	128	Mounted/RW	%DB_%DEFAULT	Yes	Yes	<a href="#">Delete</a>	<a href="#">Globals</a>
<a href="#">CCDADEHR</a>	f:\database\ccdadehr\	182	Mounted/RW	%DB_%DEFAULT	Yes	No	<a href="#">Delete</a>	<a href="#">Globals</a>
<a href="#">DEHR</a>	f:\database\dehr\	15976	Mounted/RW	%DB_%DEFAULT	No	Yes	<a href="#">Delete</a>	<a href="#">Globals</a>

## Status Bar...

- Name
- Directory
- Size
- Status
- Resources
- Encrypted
- Journal

Verify that journaling is enabled for all databases (other than those that contain only transient data)

Clicking on the database name will take you to the database properties

When deleting the namespace and database, follow this order: 1. namespace (it's pointed to the database), 2. database

# Database Properties

System Administration | Configuration | System Configuration | Local Databases

Menu Home | About | Help | Logout System > Configuration > Local Databases > Database Properties

Edit: DEHR Server: HQ Namespace: %SYS This is a Test System  
User: Licensed to: OIT-DEHR Instance: HEALTHSHARE

Save Cancel

Database Properties

Name: DEHR  
Required.

Directory: f:\database\dehr\

Encrypted: No

Block Size: 8192 Bytes

Size (MB): Current: 15976 Expansion: 128 Maximum: 21096  
>=15976 0 for Default 0 for Unlimited

Resource Name: %DB\_%DEFAULT Create New Resource...

New Global: Collation: Cache standard Growth Block: 50 Pointer Block: 16  
>=50 >=6

Global Journal State:

Preserve Global Attributes on Delete:

Mount Read-Only:

Mount Required at Startup:

Stream Location: Browse...

**Mount Required at Startup** –check box. Mounts the database when Caché starts, if the database cannot be mounted, Caché does not start.

**Global Journal State** –check box

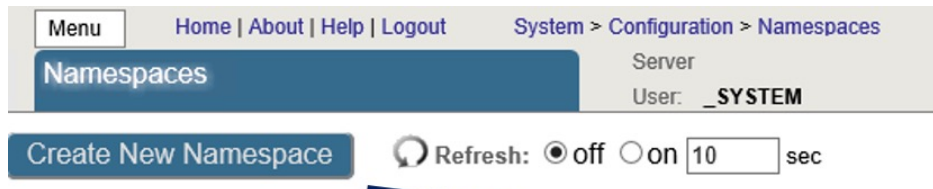
When the **Current** and **Maximum** numbers match, <FILEFULL> error occurs. User activity and other systems will come to a halt. **Maximum** number will need to be increased by 5000. This can add additional issues, sometimes a reboot will fix it.

If there is a runaway process, the database will eventually come to a <FILEFULL> again within hours.

**Technical Document:** *How to Resolve FILEFULL Errors*

# Create New Namespace

System Administration | Configuration | System Configuration | Namespace



**First:** Create a database

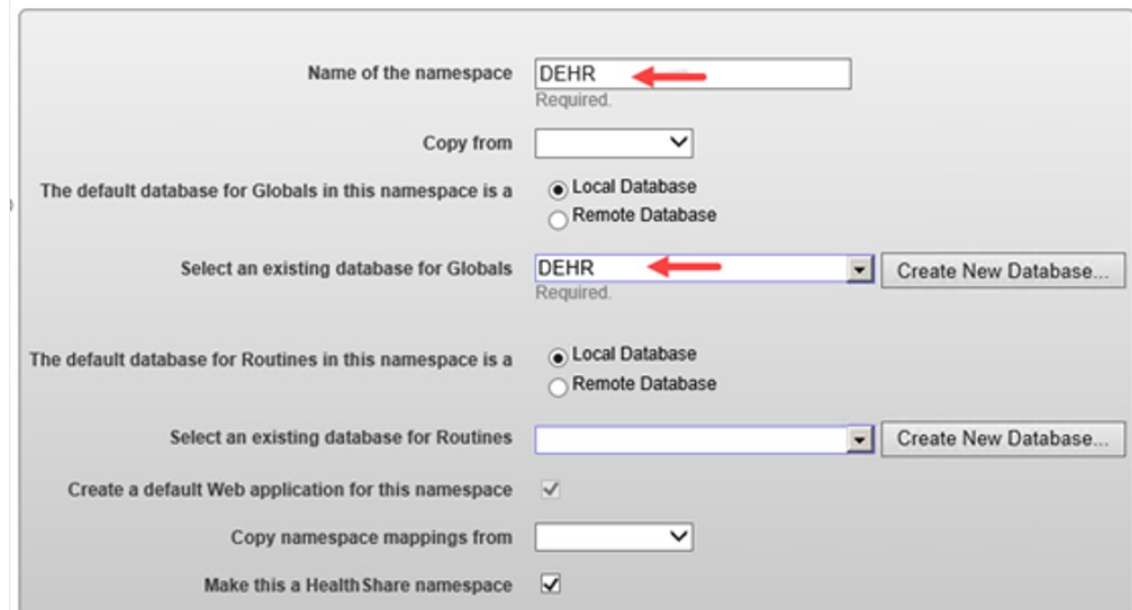
**Second:** Create a namespace. The namespace will be pointed to the database.

The name needs to be consistent

DEHR database

DEHR namespace

Use the form below to create a new namespace:



# Namespace Mappings

System Administration | Configuration | System Configuration | Namespace

Current Namespaces and their default databases for globals and routines:

Filter: <input type="text"/>	Page size: <input type="text" value="0"/>	Max rows: <input type="text" value="1000"/>	Results: 16	Page: [ <a href="#">&lt;</a> <a href="#">&lt;&lt;</a> <b>1</b> <a href="#">&gt;&gt;</a> <a href="#">&gt;</a> ] of 1
<a href="#">Namespace</a>	<a href="#">Globals</a>	<a href="#">Routines</a>	<a href="#">Temp Storage</a>	
<a href="#">DEHR</a>	DEHR	DEHR	CACHETEMP	<a href="#">Global Mappings</a> <a href="#">Routine Mappings</a> <a href="#">Package Mappings</a> <a href="#">Delete</a>

## Global Mappings

Global	Subscript	Database
%ZTSCH		DEHRNJ
%ZTSK		DEHRNJ
%Z*		DEHR
%z*		DEHR
TEMP		CACHETEMP
TMP		CACHETEMP
UTILITY		CACHETEMP
XTMP		DEHRNJ

## Routine Mappings

Routine	Type	Database
%DT*		DEHR
%HOSTCMD		DEHR
%IND*		DEHR
%INET*		DEHR
%RCR		DEHR
%Serenj*		DEHR
%XB*		DEHR
%XU*		DEHR
%ZI*		DEHR
%ZO*		DEHR
%ZTF*		DEHR
%ZTOS		DEHR
%ZT*		DEHR
%ZU*		DEHR
%ZV*		DEHR

## Package Mappings

Package	Database
AGMPI	AGMPIDEHR
BCCD	CCDADEHR
BMW	BMW



# Database Backup List

System Administration | Configuration | Database Backup | Database Backup List

Menu Home | About | Help | Logout System > Configuration > Backup Database List HealthShare by InterSystems

Server: Namespace: %SYS This is a Test System Instance: HEALTHSHARE

User: Licensed to:

Backup Database List

Define the backup database list. All databases selected and saved in this list will be backed up when any of the backup tasks is run.

Available	Selected
----- Select One or More -----	----- Select One or More -----
BMW	AGMPIDEHR
CACHE	BUSADEHR
CACHEAUDIT	CACHESYS
CACHELIB	CCDADEHR
DEHRNJ	DEHR
DOCBOOK	HSSYS
ENSDemo	PHR
ENSEMBLE	
ENSLIB	

Save Cancel

**Note:** CACHESYS is a critical file for security settings in the management portal. This file should be included in the backup scheme. *Read-Only* databases will not backup so there is no need to add it to the list

# Database Backup – Restore Process

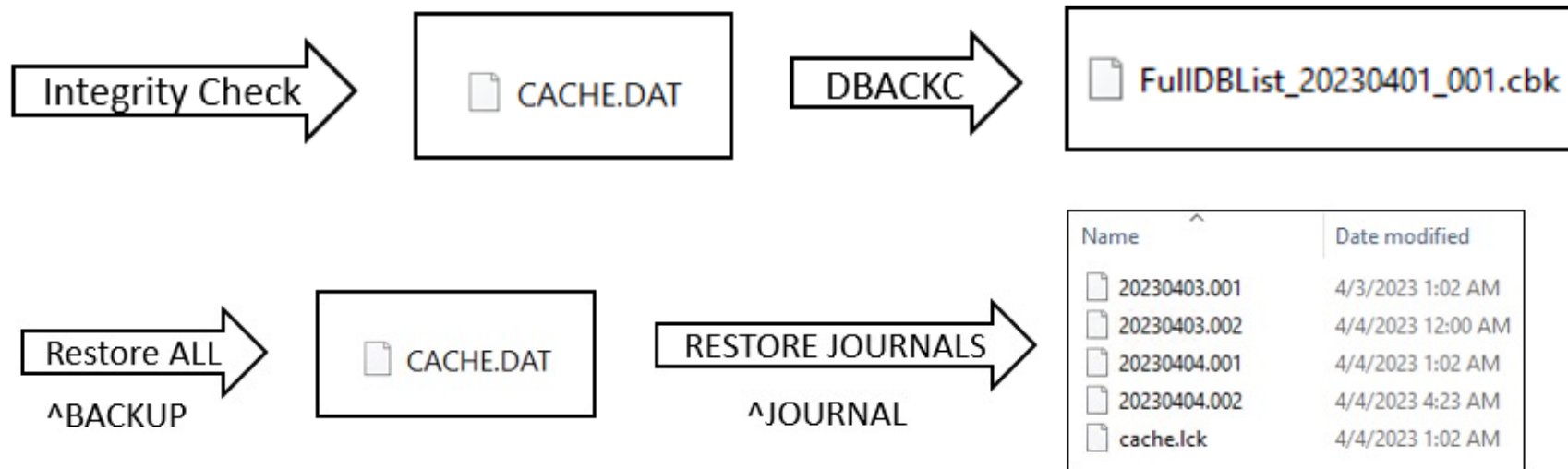
Create a backup file using the Task Schedule. Routine DBACKC will run in the background

Create a list of databases for backup

Use the ^BACKUP routine in the %SYS namespace to restore database(s)

Use the ^JOURNAL routine in the %SYS namespace to restore journal files

Applying journal files restores all journaled updates from the time of the backup to the time of the failure



# Task Schedule

## System Operation | Task Manager | Task Schedule

Menu Home | About | Help | Logout System > Task Manager > Task Schedule

Task Schedule Server: HQ pace: %SYS This is a Test System Instance: HEALTHSHARE  
User: -----d to: OIT-DEHR

Refresh:  off  on 10 sec

The following is a list of tasks scheduled for execution:

Filter: Page size: 0 Max rows: 1000 Results: 16 Page: 1 of 1

Task Name	Task Type	Namespace	Description	ID	Suspended	Last Finished	Next Scheduled		
<a href="#">Purge Tasks</a>	System	%SYS	Purges the task history global every night at 1:00 am	3		2022-01-14 01:00	2022-01-15 01:00	<a href="#">History</a>	<a href="#">Run</a>
<a href="#">Security Scan</a>	System	%SYS	Scans the security database at midnight every day	5		2022-01-14 00:00	2022-01-15 00:00	<a href="#">History</a>	<a href="#">Run</a>
<a href="#">Diagnostic Report</a>	System	%SYS	Send system diagnostic reports to WRC On Demand, and/or on a schedule	6				<a href="#">History</a>	<a href="#">Run</a>
<a href="#">Purge Audit Database</a>	System	%SYS	Purges old Audit information	7		2022-01-14 00:01	2022-01-15 00:01	<a href="#">History</a>	<a href="#">Run</a>
<a href="#">Inventory Scan</a>	System	%SYS	Run a scan of the system inventory on install or upgrade and on demand thereafter	8		2021-10-29 18:01		<a href="#">History</a>	<a href="#">Run</a>
<a href="#">Purge errors and log files</a>	System	%SYS	Purges errors and log files at 1:00 am	9		2022-01-14 01:00	2022-01-15 01:00	<a href="#">History</a>	<a href="#">Run</a>
<a href="#">Check Logging activity</a>	System	%SYS	Check active application logging at 1:00 am	10		2022-01-14 01:00	2022-01-15 01:00	<a href="#">History</a>	<a href="#">Run</a>
<a href="#">Purge Backup Log</a>	System	%SYS	Purges old messages from Cache backup log every night at 1:30 am	11		2022-01-14 01:30	2022-01-15 01:30	<a href="#">History</a>	<a href="#">Run</a>
<a href="#">Purge ZEN Reports temp files</a>	System	%SYS	Purges ZEN Reports temp files every night at 1:30 am	12		2022-01-14 01:30	2022-01-15 01:30	<a href="#">History</a>	<a href="#">Run</a>
<a href="#">Feature Tracker</a>	System	%SYS	Collects data on feature use and sends to ISC weekly	13		2022-01-09 00:00	2022-01-16 00:00	<a href="#">History</a>	<a href="#">Run</a>
<a href="#">Update SQL query statistics</a>	System	%SYS	Aggregate process specific SQL query statistics into global statistics	14		2022-01-14 11:00	2022-01-14 12:00	<a href="#">History</a>	<a href="#">Run</a>
<a href="#">Scan frozen plans</a>	System	%SYS	Check if a frozen plan would product a different plan if recreated now, runs every night at 2am	15		2022-01-14 02:00	2022-01-15 02:00	<a href="#">History</a>	<a href="#">Run</a>
<a href="#">Cleanup SQL Statement Index</a>	System	%SYS	Cleanup orphaned SQL Statement Index entries	16		2022-01-14 11:00	2022-01-14 12:00	<a href="#">History</a>	<a href="#">Run</a>
<a href="#">RPMS DB backup</a>	User	%SYS	Backup the FullDBList	1001		2022-01-14 01:04	Runs After #1002	<a href="#">History</a>	<a href="#">Run</a>
<a href="#">Daily Integrity Check</a>	User	%SYS	Daily Integrity Check of the cache database	1002		2022-01-14 01:01	2022-01-15 01:00	<a href="#">History</a>	<a href="#">Run</a>
<a href="#">Daily DB Purge</a>	User	%SYS	Script purges the old DB backup files	1003		2022-01-14 01:05	Runs After #1001	<a href="#">History</a>	<a href="#">Run</a>

# Daily Integrity Check (1)

## System Operation | Task Manager | New Task

**Task Scheduler Wizard**

This wizard helps to you schedule a task for execution by the Task Manager or to edit the details of a previously scheduled task. For user-defined tasks you must first create a new subclass of the %SYS.Task.Definition class which will then be selectable as a 'Task type'.

**Task name:** \*

**Description:**

**Namespace to run task in:** %SYS

**Task type:** \* IntegrityCheck

**Directory:**   
**Filename:**   
**KeepDays:**

**Task priority:** Priority Normal

**Run task as this user:** \_SYSTEM

**Open output file when task is running?** No

**Output file:**

**Suspend task on error?** Yes  ←

**Reschedule task after system restart?** Yes

**Send completion email notification to:**

**Send error email notification to:**

## Configured using Task Schedule

Suspend Task on error? **YES**

Will suspend Task when it comes across an error

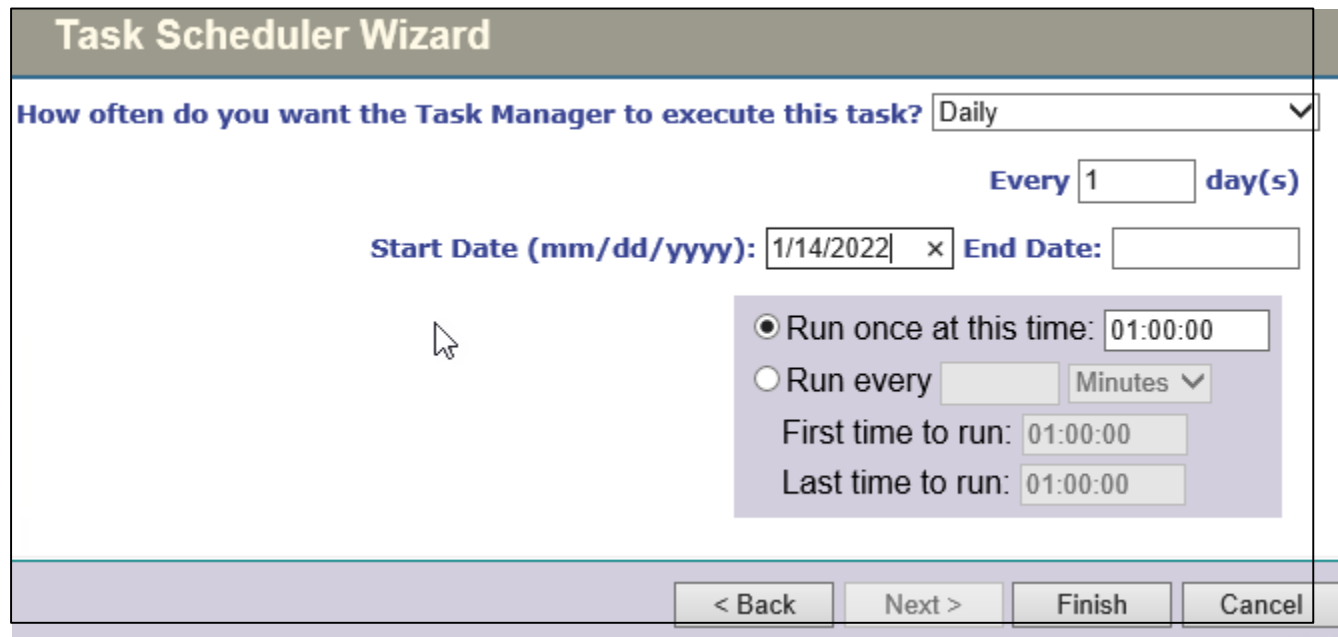
Ensures the database is healthy

# Daily Integrity Check (2)

Run Daily

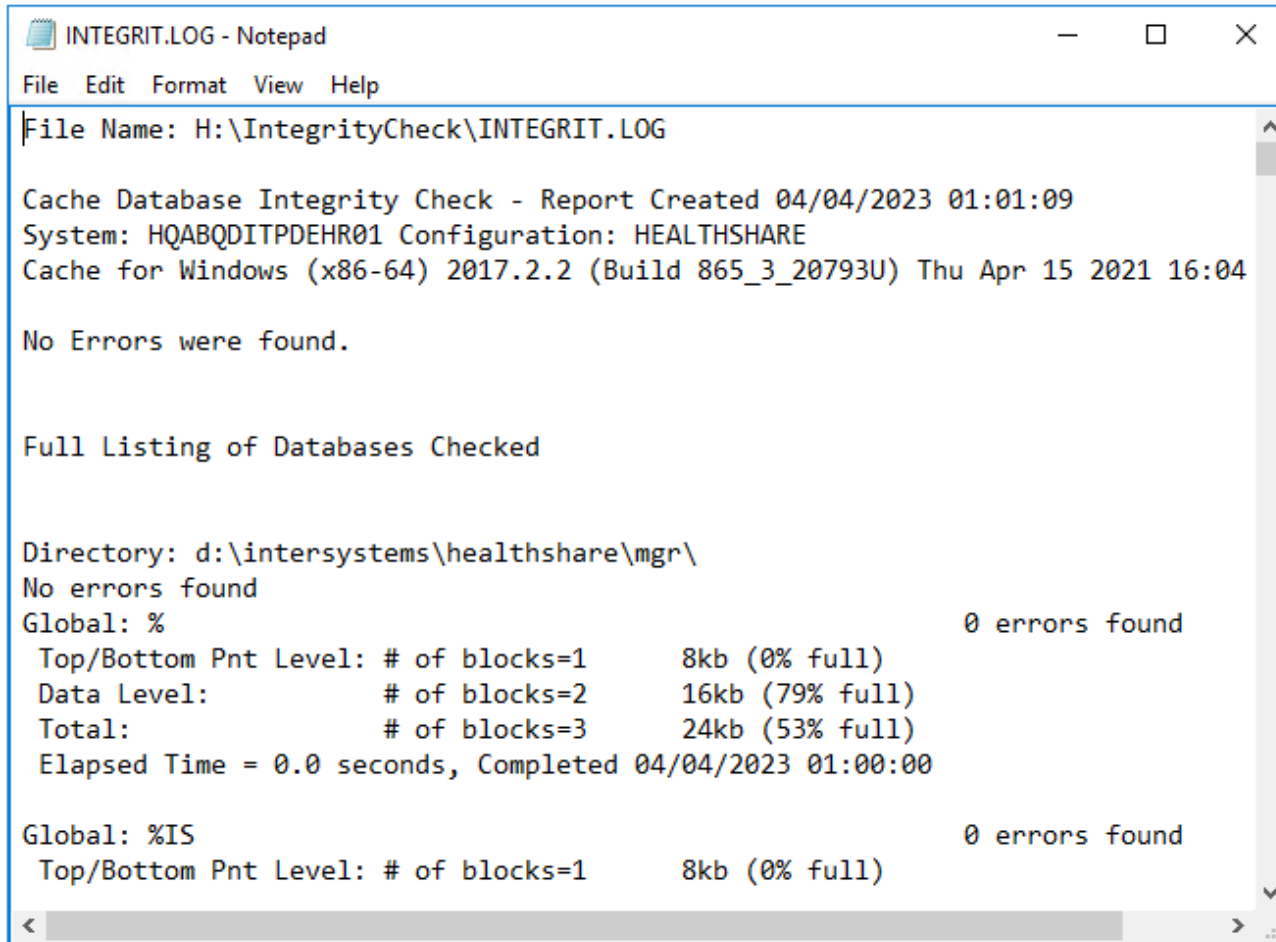
Start Date is the date and time the task will run

Recommended time: after hours or when the site is the least busiest



The screenshot shows the 'Task Scheduler Wizard' dialog box. The title bar reads 'Task Scheduler Wizard'. The main text asks 'How often do you want the Task Manager to execute this task?' with a dropdown menu set to 'Daily'. Below this, it says 'Every 1 day(s)'. The 'Start Date (mm/dd/yyyy):' field contains '1/14/2022' and the 'End Date:' field is empty. A mouse cursor is pointing at the 'Run once at this time' radio button. The time field for 'Run once at this time' is set to '01:00:00'. There are also options for 'Run every' (with a dropdown set to 'Minutes'), 'First time to run' (01:00:00), and 'Last time to run' (01:00:00). At the bottom, there are four buttons: '< Back', 'Next >', 'Finish', and 'Cancel'.

# Integrity Check



```
INTEGRIT.LOG - Notepad
File Edit Format View Help
File Name: H:\IntegrityCheck\INTEGRIT.LOG

Cache Database Integrity Check - Report Created 04/04/2023 01:01:09
System: HQABQDITPDEHR01 Configuration: HEALTHSHARE
Cache for Windows (x86-64) 2017.2.2 (Build 865_3_20793U) Thu Apr 15 2021 16:04

No Errors were found.

Full Listing of Databases Checked

Directory: d:\intersystems\healthshare\mgr\
No errors found
Global: %                                0 errors found
  Top/Bottom Pnt Level: # of blocks=1      8kb (0% full)
  Data Level:           # of blocks=2     16kb (79% full)
  Total:                 # of blocks=3     24kb (53% full)
  Elapsed Time = 0.0 seconds, Completed 04/04/2023 01:00:00

Global: %IS                              0 errors found
  Top/Bottom Pnt Level: # of blocks=1      8kb (0% full)
```

## Integrity Check Task - Checks for errors

1. Overwritten each time it runs
2. Detect corruption before users encounter it
3. Verify the structural integrity
  - A set of databases
  - Subset of globals within the databases
4. When the system shuts down abruptly, the database can get corrupted, run the Integrity Check for errors

# Scheduling a Database backup (1)

## System Operation | Task Manager | New Task

**Task Scheduler Wizard**

This wizard helps to you schedule a task for execution by the Task Manager or to edit the details of a previously scheduled task. For user-defined tasks you must first create a new subclass of the %SYS.Task.Definition class which will then be selectable as a 'Task type'.

**Task name:** \* RPMS DB backup

**Description:** Backup the FullIDBList

**Namespace to run task in:** %SYS

**Task type:** \* FullIDBList

**Device:** H:\BACKUP\  
**SaveToTape:**   
**TapeDevice:**

**Task priority:** Priority Normal

**Run task as this user:** \_SYSTEM

**Open output file when task is running?** No

**Output file:**

**Suspend task on error?** Yes

**Reschedule task after system restart?** Yes

**Send completion email notification to:** jane.doe@ihs.gov; john.doe@ihs.gov

**Send error email notification to:** jane.doe@ihs.gov; john.doe@ihs.gov

< Back   Next >   Finish   Cancel

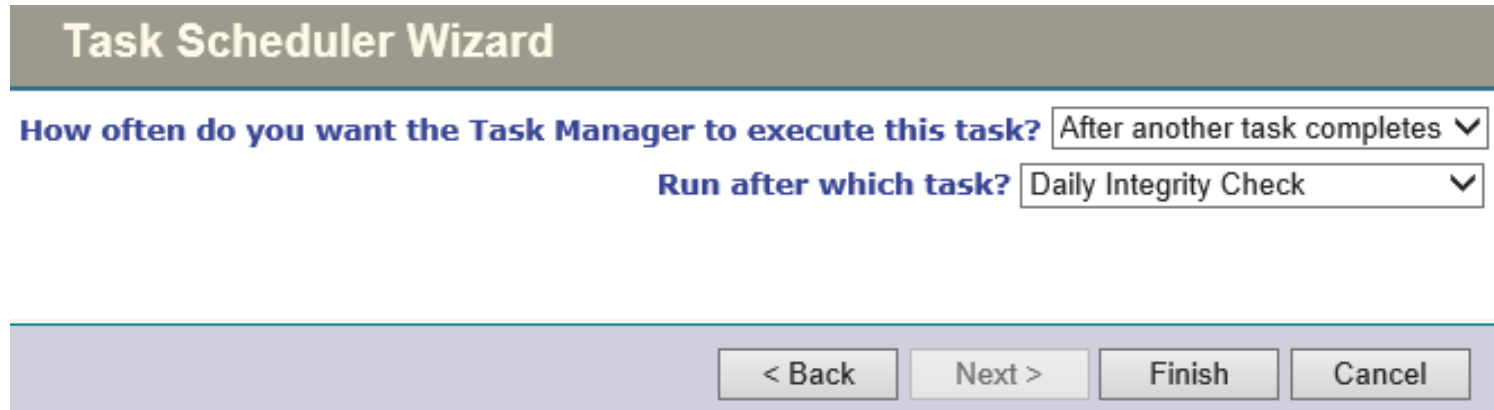
# Scheduling a Database backup (2)

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Schedule after the Daily Integrity Check

The Integrity Check will check for errors in the database. If it finds an error, the database backup will not run

The backup runs in the background, it will not interrupt users



The screenshot shows the 'Task Scheduler Wizard' dialog box. The title bar is dark grey with the text 'Task Scheduler Wizard' in white. Below the title bar, there are two dropdown menus. The first dropdown menu is labeled 'How often do you want the Task Manager to execute this task?' and has 'After another task completes' selected. The second dropdown menu is labeled 'Run after which task?' and has 'Daily Integrity Check' selected. At the bottom of the dialog box, there are four buttons: '< Back', 'Next >', 'Finish', and 'Cancel'.



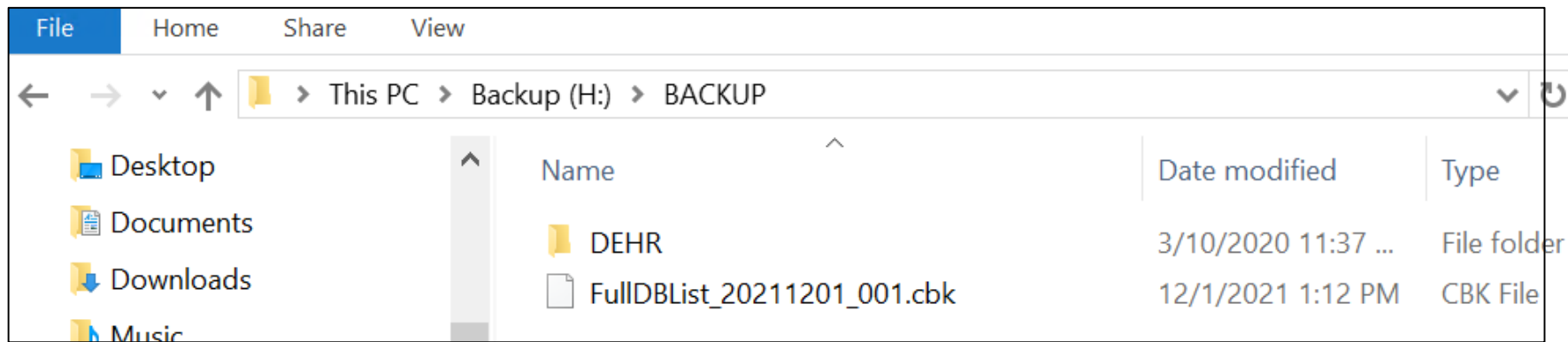
# FullDBList backup file

---

## FullDBList\_20211201\_001.cbk

the databases selected from the Database Backup List is in this file

Restore the CACHE.DAT using the ^BACKUP command



**Technical Document:** *Restore Database from Backup File*

# Backup Log

The image shows a Notepad window titled 'FullDBList\_20230403\_001.log' displaying a backup log. The log content is as follows:

```
*** The time is: 2023-04-03 01:02:00 ***

Cache Backup Utility
-----
Performing a Full backup.
Backing up to device: h:\backup\FullDBList_20230403_001.cbk
Description
Full backup of all databases that are in the backup database list.

Backing up the following directories:
d:\intersystems\healthshare\mgr\
d:\intersystems\healthshare\mgr\hssys\
f:\database\agmpidehr\
f:\database\busadehr\
f:\database\ccdadehr\
f:\database\dehr\
f:\database\phr\

Journal file switched to:
i:\journal\20230403.002
```

To the right of the Notepad window, a file explorer view shows the contents of the log file. It displays a table of files with their names and modification dates:

Name	Date modified
FullDBList_20230402_001.cbk	4/2/2023 1:05 AM
FullDBList_20230403_001.cbk	4/3/2023 1:05 AM
FullDBList_20230404_001.cbk	4/4/2023 1:05 AM

Below this table, another table shows the contents of the backup database list:

Name	Date modified
20230403.001	4/3/2023 1:02 AM
20230403.002	4/4/2023 12:00 AM
20230404.001	4/4/2023 1:02 AM
20230404.002	4/4/2023 4:23 AM
cache.lck	4/4/2023 1:02 AM

Arrows indicate that the 'Database backup list' label points to the list of directories in the log, and the '20230403.001' file in the second table corresponds to the log file shown in the Notepad window.

# Restore Globals From Journal (1)

---

%SYS>D ^JOURNAL

- 1) Begin Journaling (^JRNSTART)
- 2) Stop Journaling (^JRNSTOP)
- 3) Switch Journal File (^JRNSWTCH)
- 4) Restore Globals From Journal (^JRNRESTO)

Option? 4

This utility uses the contents of journal files to bring globals up to date from a backup.

Restore the Journal? Yes => **Yes**

Process all journaled globals in all directories? **Yes**

Are journal files created by this Cache instance and located in their original paths? (Uses *journal.log* to locate journals)? **Yes**

Specify range of files to process

Enter ? for a list of journal files to select the first and last files from

First file to process: ?

journal.log

1. Include in backup file
2. Tracks all Journal files
  - New
  - Purged
3. To restore, journal file must exist

## Restore Globals From Journal (2)

---

```
1718) i:\journal\20230331.001      1719) i:\journal\20230331.002
1720) i:\journal\20230401.001      1721) i:\journal\20230401.002
1722) i:\journal\20230402.001      1723) i:\journal\20230402.002
1724) i:\journal\20230403.001      1725) i:\journal\20230403.002
1726) i:\journal\20230404.001      1727) i:\journal\20230404.002
1728) i:\journal\20230404.003

First file to process: 1725
```

Name	Date modified
20230403.001	4/3/2023 1:02 AM
20230403.002	4/4/2023 12:00 AM
20230404.001	4/4/2023 1:02 AM
20230404.002	4/4/2023 4:23 AM
cache.lck	4/4/2023 1:02 AM

# Daily DB Purge (1)

Purges the Database backups, retain the most current files

Based on the *purgecachebks.vbs* settings, the number of backups to retain

---

**Task Scheduler Wizard**

This wizard helps to you schedule a task for execution by the Task Manager or to edit the details of a previously scheduled task. For user-defined tasks you must first create a new subclass of the %SYS.Task.Definition class which will then be selectable as a 'Task type'.

**Task name:** \*

**Description:**

**Namespace to run task in:** %SYS ▼

**Task type:** \* RunLegacyTask ▼

**ExecuteCode**

**Task priority:** Priority Normal ▼

**Run task as this user:** \_SYSTEM ▼

**Open output file when task is running?** No ▼

**Output file:**

**Suspend task on error?** Yes ▼

**Reschedule task after system restart?** Yes ▼

**Send completion email notification to:**

**Send error email notification to:**

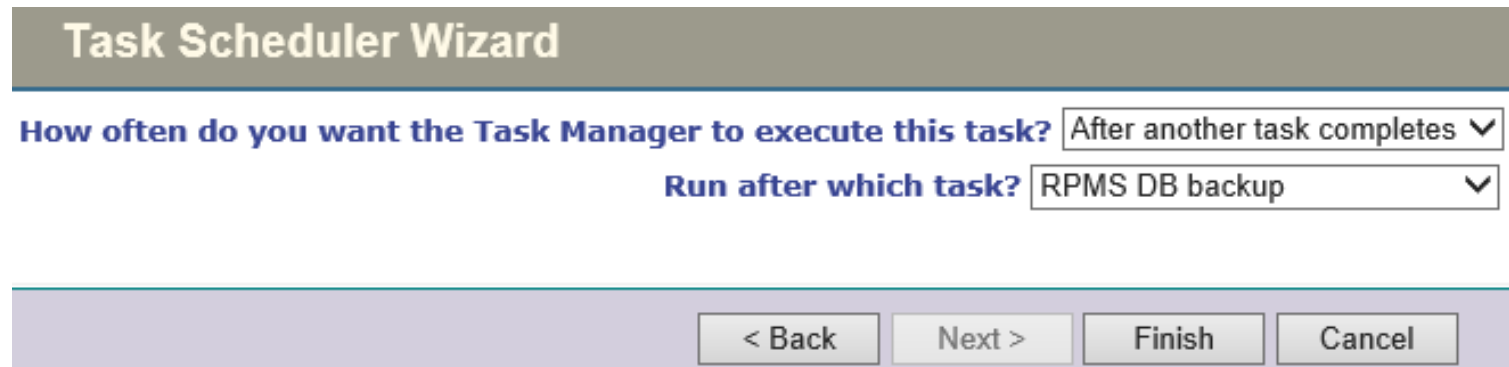
< Back   Next >   Finish   Cancel

# Daily DB Purge (2)

---

There should be a current copy before a purge is executed

Purge is based on the script entry, number of databases to maintain



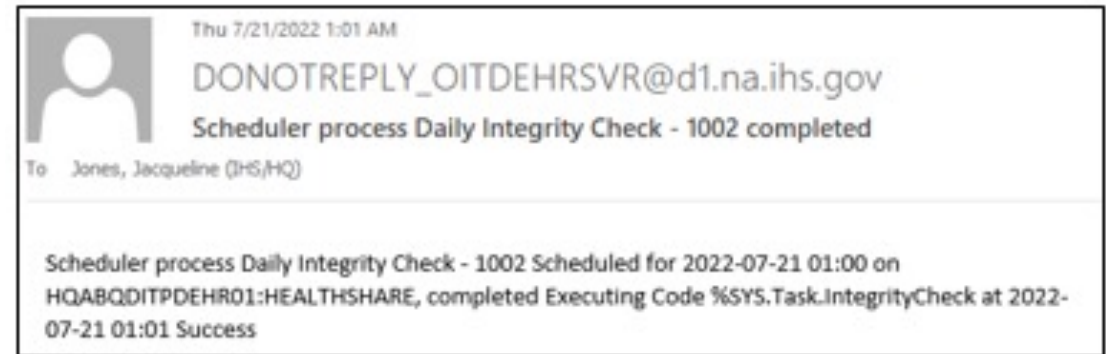
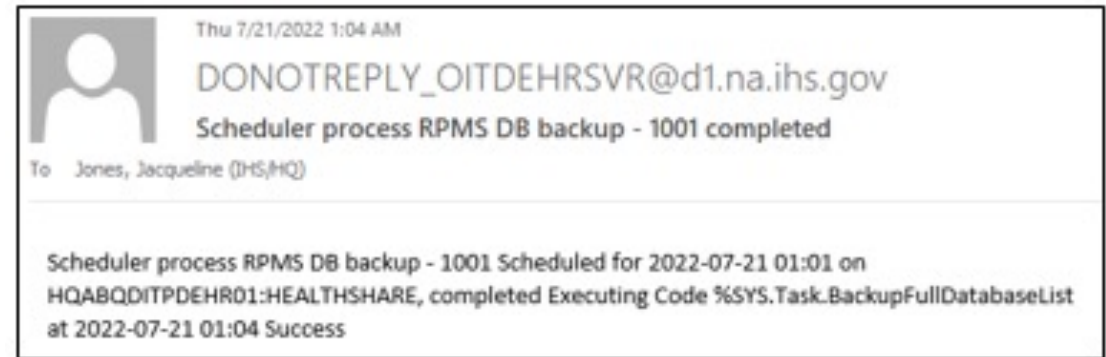
The screenshot shows a 'Task Scheduler Wizard' dialog box. The title bar is dark grey with the text 'Task Scheduler Wizard' in white. Below the title bar, there are two dropdown menus. The first dropdown is labeled 'How often do you want the Task Manager to execute this task?' and has 'After another task completes' selected. The second dropdown is labeled 'Run after which task?' and has 'RPMS DB backup' selected. At the bottom of the dialog box, there are four buttons: '< Back', 'Next >', 'Finish', and 'Cancel'.

# Confirmation E-mails

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**Technical Document:** *How-to-configure-Backup-tasks-using-the-Management-Portal-task-schedule-Windows/AIX*

Confirmation emails are sent daily to your inbox after you setup the tasks



# Journal Settings


System Administration → Configuration → System Configuration → **Journal Settings**

Menu Home | About | Help | Logout System > Configuration > Journal Settings

Journal Settings\* Server: HQ Namespace: %SYS  
User: Licensed to:

Save Cancel

Use the form below to configure journal settings:

Primary journal directory I:\JOURNAL\  Browse...  
Required.

Secondary journal directory I:\JOURNAL\ Browse...  
Required.

Start new journal file every (MB) 1024  
Required.


Journal file prefix

When to purge journal files

After this many days 14  
Required. (0 - 100)

After this many successive backups 2  
Required. (0 - 10)

*If both numbers are defined as nonzero, purging occurs when either condition is met.*

Freeze on error  

Journal CSP session

Write image journal directory J:\WIJ\ Browse...  
*Activating a WIJ directory change on cluster members requires restart.*

**Note:** Journal directory path should be the same in the Primary and Secondary Journal Directory.

**Purpose** – in the event of a run-away process journal files do not fill both directories.

**After this many days:** 14 (recommended)

**Freeze on Error**  check box



# Journal Directory

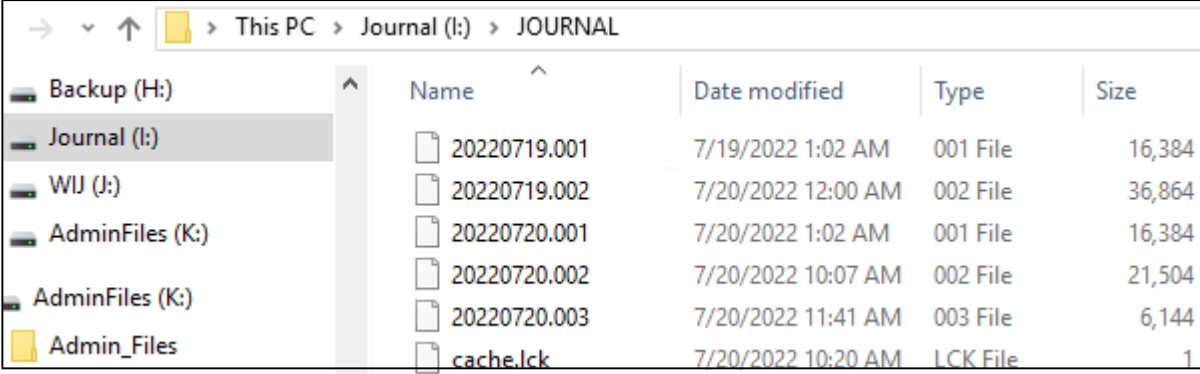
---

Journal files will get created when a Switch Journal occurs, restart Healthshare, and when the size limit is met

Monitor the journal directory for a week to become familiar with the number of journal files generated daily

When there is a run-away process, more journal files will be generated

Do not purge the files from this directory, as the Journal Log keeps track of the files



Name	Date modified	Type	Size
20220719.001	7/19/2022 1:02 AM	001 File	16,384 KB
20220719.002	7/20/2022 12:00 AM	002 File	36,864 KB
20220720.001	7/20/2022 1:02 AM	001 File	16,384 KB
20220720.002	7/20/2022 10:07 AM	002 File	21,504 KB
20220720.003	7/20/2022 11:41 AM	003 File	6,144 KB
cache.lck	7/20/2022 10:20 AM	LCK File	1 KB

# Healthshare Shutdown

---

Improper shutdown of Healthshare can corrupt the Database

1. STOP Task Manager (Enter “Yes” to all three prompts)

Select Taskman Management Utilities Option: **STOP Task Manager**  
Are you sure you want to stop TaskMan? NO// **YES**  
Shutting down TaskMan.  
Should active submanagers shut down after finishing their current tasks? NO// **YES**  
Okay!  
Should active jobs be signaled to stop? NO// **YES**

2. Stop Healthshare
3. Reboot the RPMS Server

**Technical Document:** *Shutdown the RPMS Server Gracefully*

# Restore a Database from backup

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To restore the database and bring it back to the current state you will need...

- The FullDBList.cbk database backup (most current)
- Journal files from when the journal switch occurred. Once the database is restored the system will identify the journal file to process and update to the most recent file
- It is important there is a daily database backup
- Maintain journal files for 14 days (recommended)
- Check the Integrity Log for errors daily
- Save the database backup file off the RPMS server

# Create backup files

---

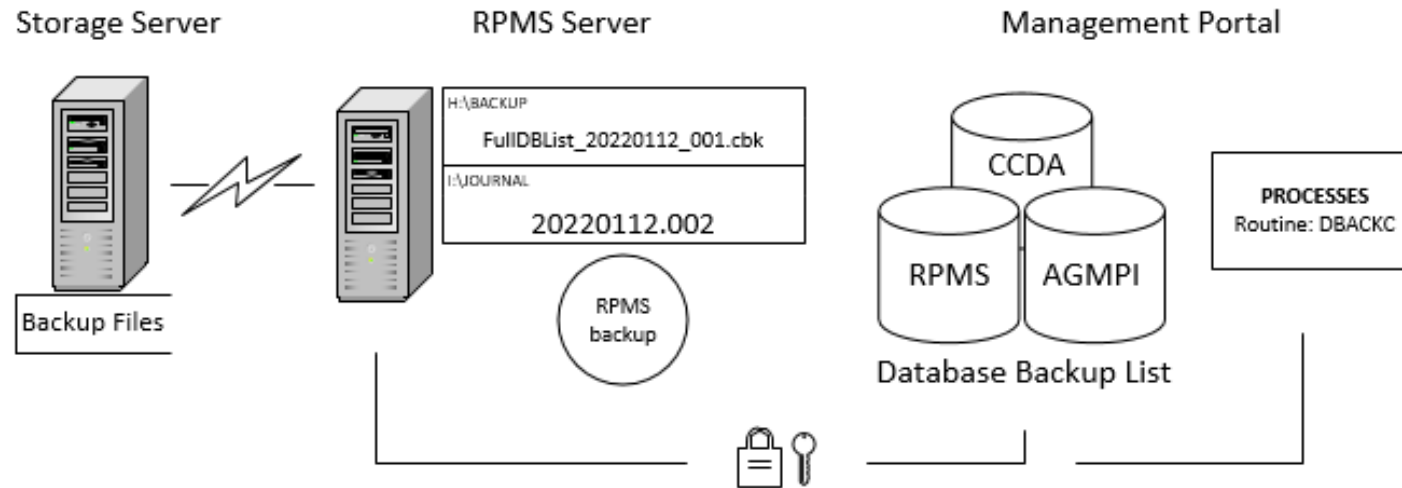
## Backup Files Check List

	√	Backup files	Location
1		Database Backup	A copy should be created off the RPMS Server (FULLDB.cbk file)
2		Cache.cpf	D:\InterSystems\Healthshare\cache.cpf
3		_LastGood_.cpf	D:\InterSystems\Healthshare\_Last Good_.cpf
4		CACHESYS database	D:\InterSystems\Healthshare\mgr\CACHE.DAT
5		Journal log	D:\InterSystems\Healthshare\mgr\journal
6		Journal files	A minimum of 14 days of journal files maintained off the RPMS Server
7		Export Users	D:\InterSystems\Healthshare\mgr\UsersExport
8		EHR Repository Files	EHR repository server
9		Application Export Files	UFMS, EISS, OMB, Report, EMC, etc.
10		NoJournal database	Path defined by site (a few sites have critical globals pointed to this database)
11		mksysb	AIX system image backup

Save your files off the RPMS server and off the virtual environment, a safe place where you can retrieve files anytime

**Technical Document:** *Critical Backup Files*

# Database Backup Overview



- File Manager Access Code: @
- Programmer Mode Access  
%SYS namespace
- %ALL Role



BACKUP folder

Database Backup List

Task Schedules

- Daily Integrity Check
- RPMS DB backup
- Daily DB Purge

Journal files (restore a database)

Update Critical Files Quarterly

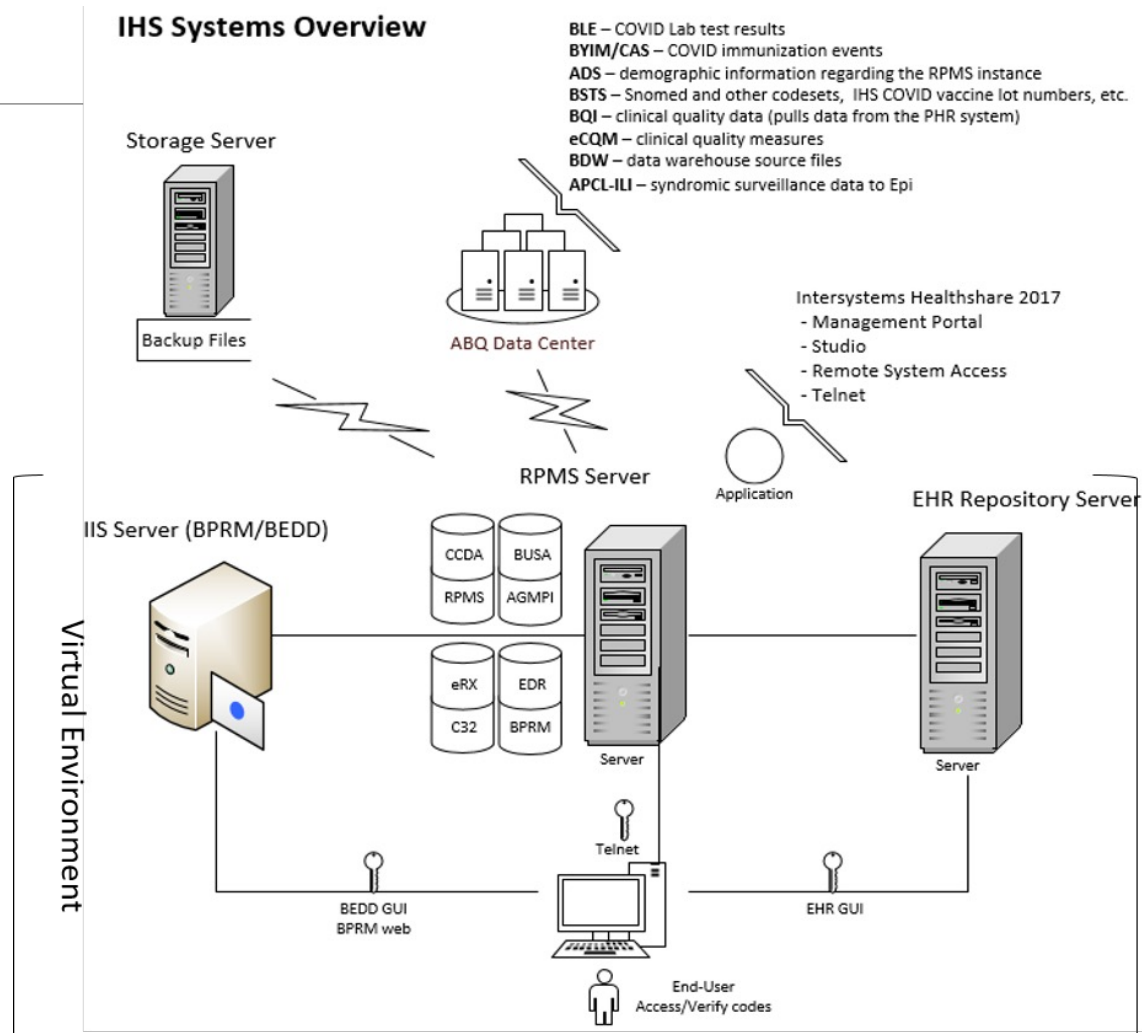
# Reboot the servers

RPMS server

EHR repository server

IIS server

**Note:** This process reloads the operating system files, purge ghost processes, fix many common problems, such as slow processing or freezing.



# Ransomware – Protect the system/database



## JUNE 2022 CIO Newsletter Article - Importance of System Backups

All the data on those systems are now being held hostage

Restore or rebuild the systems from the backup. Backup that is saved on a different server (recent copy). Test and verify the backup annually

Encrypt the Database

Backup Journal Files

Maintain an updated Contingency Plan

# Safeguard the Patient Healthcare Systems

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Safeguard the RPMS, EHR, and IIS servers by having minimum applications installed

Reduces the vulnerability reports for security updates for the various applications

The majority of the RPMS Admin tasks can be performed from the admin's workstation.

Assign Security Keys based on users role

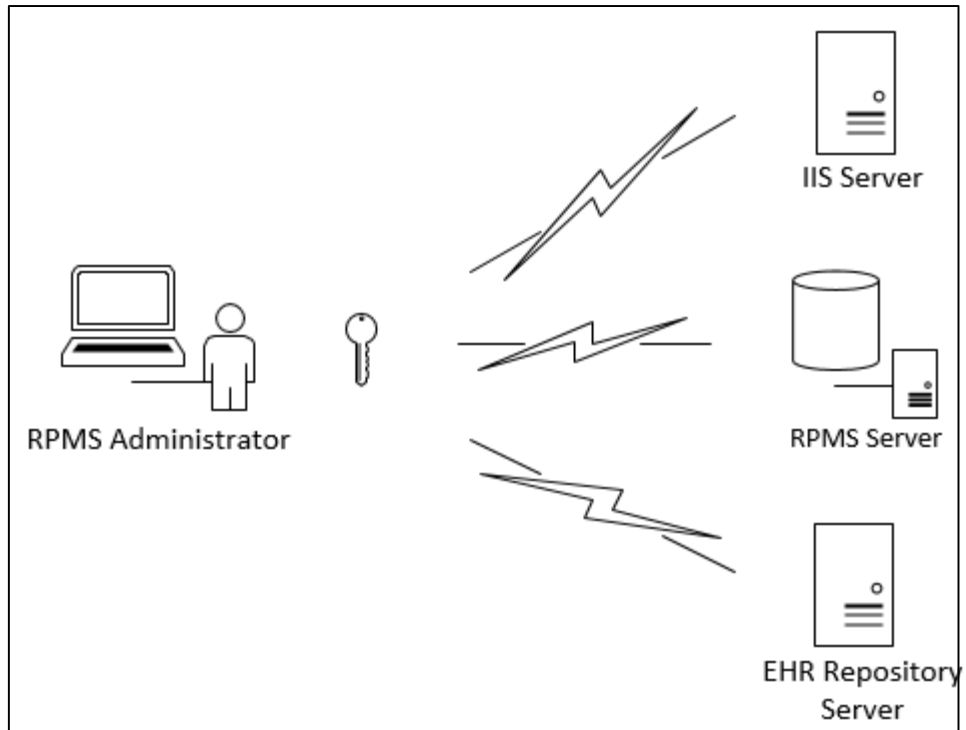
Protect Superuser Options

Install Security patches



# RPMS Admin System Access

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Telnet – RPMS database

Perform RPMS admin duties

Install RPMS Patches

Manage RPMS servers (IIS, EHR, Vista, etc.)

Update Healthshare configurations

<http://localhost:57772/csp/sys/UtilHome.csp>

# Technical Documents

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Download...

Hardware Configuration Recommendations

How-to-configure-Backup-tasks-using-the-Management-Portal-task-schedule-Windows/AIX

Creating-a-Database-Backup-Manually-in-RPMS-508

Restore a Database from a backup file-508

Critical Backup Files

How To Optimize RPMS Healthshare 2017

RPMS Server Applications Roadmap

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# Demo – Configuration, Tasks, and Files Overview

# Questions

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Send follow up questions to: [Jacqueline.jones@ihs.gov](mailto:Jacqueline.jones@ihs.gov)