



Customer Release Notes

eRAD PACS
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Server Build 7

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New Features and Enhancements

1. Tool to validate the state and connectivity of all servers

The script `~/component/tools/validateFarm.sh` is available to check the state and configuration of all farm servers. This script should be run on the application server. The tool is available from the GUI (Admin/Devices/Farm page) to users with Admin rights. The output lists detected errors, misconfigurations and invalid states. The output differs when medsrv (specifically, the hypervisor service) is running on all servers versus when it is not. See the Jira issue for which checks are performed based on the running state.

2. System initiated (automatic) series forward

Device-specific outbound coercion rules are available to filter series and objects when forwarding objects to registered DICOM devices. The feature uses the PROCESS control variable to indicate when to stop processing a specific object. When the variable evaluates to NULL(), the (forward) request for the affected object stops. Skipped objects are identified in `oper_info` and `oper_error` log entries. Outbound coercion rules are applied to objects after soft edit changes from PbR objects have been applied. GUI-accessible configuration panels are available on the Devices pages. Preceding and trailing outbound rules applicable for all devices can be configured on the Admin/Devices page. Device-specific outbound rules can be configured on a device's Edit page. These coercion rules do not apply to forwards initiated in response to a DICOM Retrieve (C-MOVE) request. For instructions using the PROCESS control variable and defining coercion rules, refer to the eRAD PACS Data Coercion manual.

3. Create a support tool to reprocess all or select studies with keeping the original LRU queue

The script `~/cases/reheatStudies.sh` is available to reprocess (reheat) all studies whose cached data files have a `ReceivedDateTime` before a defined date and time. The output lists all studies in the cache repository and whether or not they are processed or skipped.

4. Make list DB conversion more robust

Additional checks added to assure v7 user accounts are converted into v9 user accounts. This feature also permits applying the conversion process to converted accounts, if necessary. Remove the user account from the database and the account files will be reprocessed when the user logs in again.

5. Create script consumable output for hdclient printroles

The `hdclient` tool has a new argument, `-s`, that creates output in a computer-readable format.

6. Implement authentication on stream server

To enable the viewer to authenticate a user's session, the stream server passes it the session ID.

7. Minimize moves in the repository by not insisting on deleting the oldest resource

Any cached study within a configurable range of time is considered purgeable when performing the scheduled (nightly) cache purging exercise. By default, the configurable range is 5% of the defined time range. Configuring the tool to 0% results in strict adherence to the purge time range, making it backward compatible with previous versions. The setting is deleteOld and resides in ~/repositorypart.cfg in the mount's root directory.

8. Support sharing files amongst servers in a server farm

UPGRADE NOTICE: This enhancement creates a shared directory with two subdirectories if it has not been created prior to the install. In a server farm, these directories must be shared between all farm servers except the database and load balancer servers prior to starting medsrv. A shared directory, /home/medsrv/shared, must be created on each server, except the database and load balance, for sharing files between servers in a server farm. The directory requires two sub-directories, ~/tmp and ~/var. Details for creating the new directory are in the Shared storage requirements section of the eRAD PACS Manufacturing Manual.

9. Store rendering parameters along with images

UPGRADE NOTICE: All cached data needs to be reprocessed to insert additional information into the data files (blobs).

REVERSIBILITY NOTICE: Reprocessed cache files contain additional data that is incompatible with older versions of the software.

Rendering parameters for all clients are stored with the pixel data in the server cache files (blobs). Existing cache data needs to be reprocessed to add these missing details. This new file format is indicated by the.ei4 file extension.

10. Allow manual override for repository mount's isDedicated flag

UPGRADE NOTICE: To avoid unnecessary space calculations, this new setting should be manually created and set to "true" for any repository whose root and first mount is a single file system. If a repository's root and first mount is a single file system, the system unnecessarily calculates the size of the repository every night when making space. To avoid this, a configuration setting, forceDedicated, in the repository's repositorypart.cfg file is available. When set to "true", the space checking script skips the size calculation for the associated repository.

Resolved Issues

1. MySQL version errors in info.log

The pattern used for matching MySQL's version number changed in the current version, resulting in invalid error messages in the log file.

2. Worklist row currently on worklist acts as if it wasn't loaded

Study row selection on the worklist could become inconsistent, resulting in misapplication of a batch tool.

3. Study directory stuck in 'dead resource' state

Merging two or more studies into a new study which is then merged with a different study, followed by a delete request could leave invalid state data in the database due to a missing lock when processing the merge and delete requests, preventing the registration of the original studies if resent.

4. Load balancer displays MySQL error on stop/start

While the load balance server doesn't use the remote database or a local database, it does generate logging data and that data is logged in the global database. As a result, the load balancer server requires the mysql component.

5. Import media feature is broken in server farm

Media import had not been updated to support the server farm roles, attempting to upload the data to the application server for processing. This feature has been updated to upload the media data to the shared temporary repository and the command to perform the import is submitted to the registration server.

6. Downloadable Worklist CSV with no Authentication

Exported worklists could be downloaded without an active user session if the user manually constructed the applicable URL in a browser window.

7. Uncompressed images having YBR_FULL_422 Photometric Interpretation fail to register

The updated DCMTK toolkit changed its behavior processing the sample per pixels value defined in YBR_FULL_422 multi-frame objects, resulting in an error calculating the full image size. A workaround has been applied that intercepts affected image objects and calculates the full image size as defined by the object.

8. OBJECT level logs on the Logs page when deleting study series/object

Object level log entries were incorrectly included in the log database. This has been corrected so they appear in the forever logs only.

9. Load balancer configuration using hostnames for backend servers

The load balancer server's configuration used hostnames rather than IP addresses, which won't work at sites which are not set up to resolve FQDN. The generator script now uses IP addresses when available and falls back on hostnames when not.

10. User action 'delete' can cause taskd lock

User-initiated study delete requests could cause taskd to lock up when a deleted task attempts to add a new cleanup task.

11. Can't open completed order from the RIS

A recent bug fix prevented a RIS user from opening Completed orders in the viewer or web viewer. Support for this behavior has been restored.

12. Hyperdirector does not start

When installing a server from scratch, the hyperdirector RPM is pulled in as a dependency but isn't started, causing a failure during startup since it is expected to be running.

13. SHARED_ROOT variable is not picked up after installation

Failure to pick up a modified environment variable before starting the hyperdirector caused the server validator to fail.