Intelligent Data Distribution

eRAD Child Servers provide fail-safe, faster connectivity in a distributed reading environment.

eRAD's architecture supports the intelligent staging of studies in a distributed reading environment, as well as system redundancy.

Radiologists stationed in a distributed reading enterprise (reading from a global worklist) must have fast access to studies acquired locally—without waiting for the entire study data to be transmitted to the central server. This is particularly important in settings where bandwidth is limited or unreliable and where the study size is large (such as acute care settings) or needs to be reviewed immediately upon acquisition.

eRAD Child Servers allow images acquired locally to be read and reported immediately—without sending the entire study data to the central server. eRAD's study redirection workflow means that studies are accessed from the child server of the site where the study was acquired. That child server holds a full copy of eRAD software, so that the complete toolset—dictation, reporting, patient folders, protocols—is directly available. Even priors can be held at the child server. Meanwhile, the metadata for the study (relatively small in comparison to the study data) is transmitted in near real-time to the global worklist for immediate knowledge of, and access to, the study by other remote sites. Eventually all study data can be propagated up to the central server for archiving and disaster recovery.

This architecture ensures that work continues even if connectivity to the global worklist server is lost. If connectivity is broken between the remote site and the main server, remote users can simply log directly onto the local child server and read and report until connectivity is restored. Then all study information, statuses, medical reports, etc. are automatically propagated up to the central server and reconciled with the main system.

Intelligent Study Redirection elegantly solves issues of latency and system redundancy in high-volume settings with network traffic. In addition, eRAD Child Servers perform all of the functions of an Integrated DICOM Gateway.

Intelligent study redirection.

Remote requests from a global worklist are redirected to the local child server if it contains the study, enabling the faster throughput that is critical for STAT and acute care exams. Even priors can be pre-staged on the child server for faster access.

Fault-tolerance and latency solution.

Inadequate bandwidth does not limit the access speed, nor does the study size. Child servers allow the user to avoid waiting for communication to the central server, so distributed sites stay productive.

Global worklist transparency.

Remote activity on a child server is immediately communicated (via metadata) to the global worklist so that local activity is recognized and usable by all right away, regardless of location.

Business continuity and system redundancy.

Local server access allows viewing and reporting if the parent server is down. Full study data is auto-reconciled with the central server when connectivity is restored, saving revenue and days of work each month.

Encryption
Data is transferred securely—inside and outside the enterprise.

Compression
Users define when and how data is compressed, for the most efficient and streamlined transfer across the network.

Persistence
Remote sites with unstable bandwidth still get their data. Missing data is retransmitted until all data is confirmed as received.

Global Worklist
Studies and workflow are governed by a common worklist, shared throughout the enterprise.

Access to Priors
Technology allows access to relevant priors from legacy systems without costly migrations.

Rules-based Pre-Fetch
It is easy to define rules to govern which studies are sent to which radiologists.

Data Coercion
Legacy and non-compliant data can be managed so studies, independent of their source, are normalized.

Streaming
Studies can be streamed real-time to avoid lengthy download times.

Roles-based Access
Configure the system to provide access to images based on profiles tailored to a user's preferences, specialty, schedule, location, etc.

Under the Hood

Intelligent Data Distribution

RadNet Technology Solutions

Intelligent study redirection

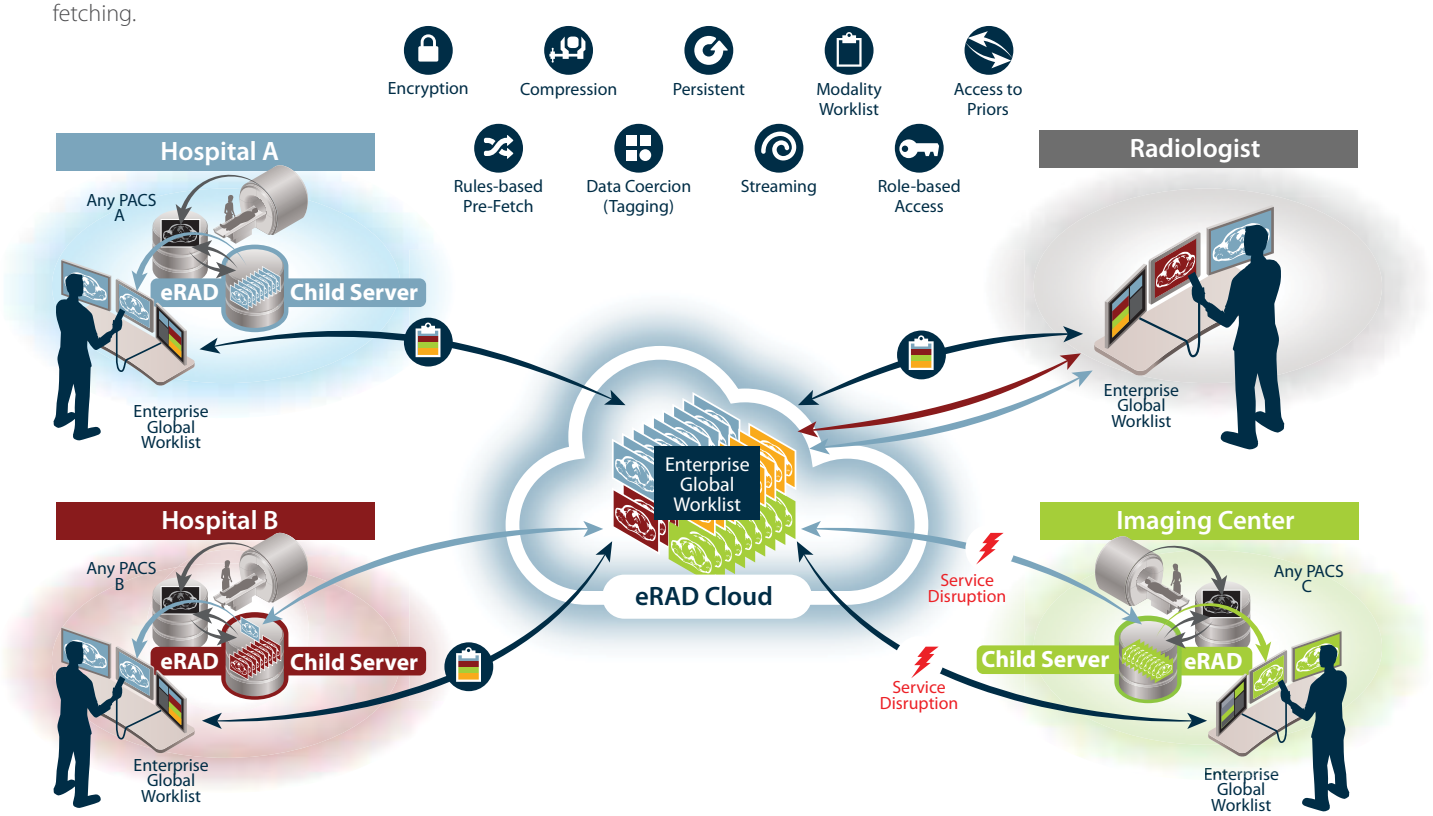
Remote requests from a global worklist are redirected to the local child server if it contains the study, enabling the faster throughput that is critical for STAT and acute care exams. Even priors can reside on the child server for faster fetching.

Sophisticated traffic control

eRAD employs sophisticated technology to ensure data is transferred securely, efficiently, and intelligently — so that the data and images are accessible wherever, whenever and however the enterprise requires.

Global worklist transparency

Remote activity on a child server is immediately communicated (via metadata) to the global worklist so that the local activity is recognized and usable by all immediately, even users on disparate systems.



Intelligent study handling

Radiologists stationed in a multi-site and/or disparate site enterprise have access to studies acquired locally—without waiting for the entire study data to be transmitted to the central server.

eRAD's Radiology Cloud

eRAD's cloud-based architecture makes it ideal for distributed sites and remote communication, and its web delivery means that users can access applications anytime, anywhere.

Business continuity and system redundancy.

Local server access allows complete image viewing and reporting if the parent server is down. Full study data is auto-reconciled with the central server when connectivity is restored, saving revenue and days of work each month.

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