



MERGE VNA

# More than a VNA

“Merative is the most innovative  
healthcare data interoperability  
company.”

\*Frost Radar™: US Healthcare Interoperability Market 2020, Frost & Sullivan

Many organizations made significant investments in their electronic health record (EHR) technology over the last 5 to 10 years to create a centralized source of truth for the majority of patient information. This became invaluable during routine patient encounters that involved a primary care physician and the overall care team who needed a full picture of their patient's health anytime the patient was being treated. The successful adoption of this technology was tested during recent events like the COVID-19 pandemic, exposing whether this significant investment lived up to its purpose—that it would scale up and down, and make patient information available whenever and wherever it was needed by the care team. What was potentially not addressed during this transformation and adoption of technology was a similar source of truth for patient imaging tests and results, which can consume much more storage and be more difficult to provide as broadly.

Merative believes a Vendor Neutral Archive (VNA) is the central source of truth in a successful enterprise imaging strategy to complement the existing comprehensive EHR strategy many organizations have put in place.

There are many key factors to consider in determining how effective is your existing imaging technology. Whether it be legacy or new PACS solutions, existing imaging archives or a VNA across your enterprise, is it interoperable? Has it lived up to its role as that central source of truth for imaging?

As you ponder this question, focus on the details and features that constitute a central source of truth for imaging that complements your EHR. Some other questions you might ask: Are my imaging sources unified and interoperable? Can anyone access images no matter where they are when they need them? Is the VNA (if you have one) truly vendor neutral and able to ingest any type of content, deployed as hybrid cloud native and agnostic? Standards-based interoperability is a cornerstone and should be extended to the cloud with Kubernetes based deployments on the strategic private or public cloud of your choice. Is the VNA an active orchestrator or a passive archive? Are you ready to employ AI to alleviate some of the more tedious time-consuming tasks that frustrate many diagnosticians today?

Are you ready to unlock the power of AI to enhance diagnostic completeness and accuracy?

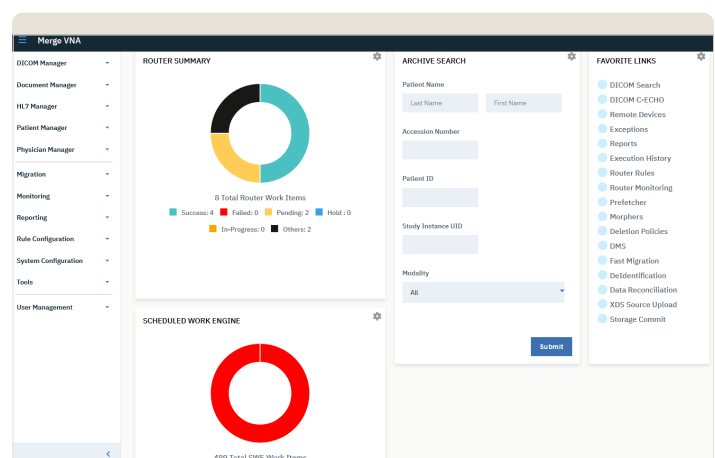
Underpinning PACS for primary reads and AI assistance requires a multi-threaded orchestration engine, something that passive VNAs cannot perform effectively. Does your VNA have a robust, easy-to-use user interface? Do your data administrators have the independence to employ intuitive do-it-yourself (DIY) tools to help ingest, clean and manage data throughout its life cycle, without help from your VNA vendor? Are advanced data management, elasticity of infrastructure, advanced client tools, and security and standards-based compliance available with your VNA? Will your VNA vendor enable you to adapt and grow as your IT infrastructure expands, while innovating to future-proof your enterprise?

“To maximize the revenue impact from cloud technology, it is necessary to complement its adoption with transformation.”

'Unlock the business value of hybrid cloud', IBM Institute for Business Value  
September 2021 report

A VNA that begins to address some of these questions is a mature VNA, and those that offer many of these features would serve as “more than a VNA.”

Merge VNA orchestrates images from across the enterprise, serving as the longitudinal single source of truth. This solution is truly vendor neutral, enabling ingestion and connectivity with any device and any cloud vendor of your choice. As the gateway to cloud, it enables access to AI ecosystems built on interoperability with an enterprise imaging platform deployed in the hybrid cloud.



This latest version of Merge VNA unifies the Merative enterprise imaging portfolio by bringing Merge Universal Viewer, Merge Workflow Orchestrator, Merge PACS™, Merge Cardio™ together through a common platform, operating as “more than a VNA”.

### Key differentiating capabilities of Merge VNA are:

- Hybrid cloud with Red Hat OpenShift, offering you true interoperability, with the freedom to partner with the on-prem and cloud vendors of your choice
- Cloud-native infrastructure—scalable and elastic with AI application ecosystem
- Workflow engine that connects a cache-less PACS across departments for streamlined viewing
- “Active archive,” serving as an orchestrator for other applications
- Replication Content Management (RCM), a dual peer, geographically dispersed server configuration for near zero downtime, business continuity and resiliency
- Data liquidity – stored data is interoperable across systems, modalities and tools, offering you the freedom to move your data when you need to, where you need it
- Scalability – compatible with supporting from a single department to an enterprise comprised of 100+ hospitals and 10,000+ modalities
- Security – encryption and RESTful APIs throughout the application to ensure your data is safe
- Ingests both DICOM and non-DICOM data (as XDS)
- Exceptions management tools to automate onerous manual data-cleansing steps
- Standards-based AI workflow incorporating the HL7 OMI proposed industry standard
- Analytics foundation built on Elasticsearch that enables intuitive keyword search queries of EHR data

### When evaluating VNAs from different vendors, some questions to ask include:

- Can service lines outside of radiology and cardiology be connected with this VNA?
- Can all imaging content within the enterprise be centralized in a single VNA regardless of source or file format?
- Do you have the ability to store, manage, archive and share all the images and image-related information from across your enterprise?
- Is it standards-based and truly interoperable, and does it adhere to industry standards such as IHE, DICOM and HL7?
- Do you have the flexibility to deploy on your choice of on-prem and cloud providers?
- How does the VNA support disaster recovery, business resiliency and limiting downtime?

When comparing VNA options, it is important to assess which class of VNA you need and whether the VNA you are considering addresses your enterprise imaging requirements. In the checklist below, compare features provided by basic VNAs on the market, those of mature VNAs, and what is offered in “more than a VNA.” Merge VNA can address the needs of organizations from the beginning to advanced stages of their enterprise imaging journey.



Feature	Basic VNA	Mature VNA	"More than a VNA"
<b>Basic Data Management</b>			
Integration with most modalities / PACS / Viewers	✓	✓	✓
DICOM images in standards- based DICOM Part 10 format	✓	✓	✓
Non-DICOM objects in DICOM-wrapped format		✓	✓
Maintain 2 separate copies of all imaging data		✓	✓
IHE, DICOM, HL7 standards		✓	✓
FIFO ILM policy	✓	✓	✓
Order-based pre-fetching	✓	✓	✓
Support DICOM migration		✓	✓
Basic inbound tag morphing		✓	✓
<b>Smarter Data Management</b>			
Integration with the latest data standards, including newest image formats, DICOM, XDS		✓	✓
Store non-DICOM objects in original format		✓	✓
Connectivity and compatibility with AI solutions for image processing and orchestration			✓
Advanced inbound / outbound tag morphing for data store, data retrieval, bi-directional query			✓
Client designed and simulated advanced ILM policies based on state, federal data retention standards			✓
Order / Image multi-object based pre-fetching			✓
Compression of data options in parallel with deletion rules to keep data but also conserve space			✓
Include DICOM migration tools at no extra cost			✓
<b>Smarter Elasticity of Infrastructure</b>			
Scales to 500,000 exams for 1 - 5 facilities.	✓	✓	✓
Scales to 1M annual exams for 6 - 10 facilities.		✓	✓
Scales to multiple millions of annual exams across multiple states in a single VNA instance with a single database			✓
Scales easily as M&A occurs or service lines grow			✓
Provides a lower total cost of ownership (TCO) by archive consolidation among all 'ologies, not just radiology and cardiology			✓
Designed for image retrieval speeds needed by image intensive physicians like radiologists, cardiologists, neurologists, orthopedists, surgeons etc.			✓
Built-in disaster recovery and business continuity options			✓
True active-active archive and rolling upgrades			✓
Proactive self-monitoring application to promote system health			✓

Feature	Basic VNA	Mature VNA	"More than a VNA"
<b>Smarter Client Tools</b>			
HIPAA logging and maintenance	✓	✓	✓
Customizable web-based or remote admin tool for client independence, providing access to all VNA features and customized reporting		✓	✓
eMPI integration		✓	✓
Patient identity aggregation			✓
Accepts, manages and exchanges all active DICOM SOP Classes		✓	✓
Presentation states and key images		✓	✓
Add new DICOM SOP classes and transfer syntaxes		✓	✓
Automatic reconciliation with an order or visit			✓
Search across all four information levels including Patient, Study, Series and Image			✓
DIY features (including pre-fetching, bi-directional DICOM tag morphing, migration capabilities, storage move and replacement, and intelligent routing)			✓
<b>Smarter Security and Standards Compliance</b>			
Cloud copy options		✓	✓
Is available in a cloud-native hybrid cloud architecture			✓
Hybrid cloud with Red Hat OpenShift offers users true interoperability, with the freedom to partner with the on-prem and cloud vendors of your choice			✓
Includes native IHE XDS registry & repository			✓
Supports IHE standards (including basic patient privacy and consent (BPPC), IOCM for change management between systems, and ATNA logging)			✓
Standards-based AI workflow with adoption of HL7 OMI proposed industry standard			✓
Enhanced security features include SSO integration and encryption key rotation			✓
RESTful APIs throughout the application to ensure your data is safe			✓
Diverse options for image file storage (including DICOM, non-DICOM, JPEG2000, XDS)			✓

## About Merative

Merative is a data, analytics and technology partner for the health industry, including providers, payers, life sciences companies and governments. With trusted technology and human expertise, Merative works with clients to drive real progress. Merative helps clients reassemble information and insights around the people they serve to improve healthcare delivery, decision making and performance. Merative, formerly IBM Watson Health, became a new standalone company as part of Francisco Partners in 2022. Learn more at [www.merative.com](http://www.merative.com)

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Merge imaging solutions are manufactured by Merge Healthcare Incorporated, an affiliate of Merative US, L.P 900 Walnut Ridge Drive, Hartland, WI USA 53029.

ECM-40896 Rev 3.0



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## Learn how you can benefit

Merative provides award-winning enterprise imaging solutions for radiology, cardiology and orthopedics, using vendor neutral cloud and AI technologies to reduce workspace complexity and create seamless workflows.

Visit [our website](#) or [talk to an enterprise imaging solutions expert](#) to learn more about how Merative can help you.