Merge

MERGE SOLUTIONS FOR VNA (VENDOR NEUTRAL ARCHIVE)

More than a VNA

The cornerstone of a successful enterprise imaging strategy.

Many organizations made significant investments in their electronic health record (EHR) technology over the last decades 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 EHR 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.

Merge 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 factors to consider in determining how effective is your existing imaging technology environment—whether it is based on legacy or new PACS solutions, existing imaging archives or a VNA across your enterprise. Focusing on the details of a central source of imaging data that complements your EHR you might ask:

- Is it interoperable?
- Has it lived up to being a central source of truth for imaging?
- 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?
- Can it be deployed as hybrid cloud native and agnostic?
- Standards-based interoperability is a cornerstone for cloud based deployments such as the private or public cloud of your choice. Is the VNA an active orchestrator or a passive archive?
- Are you ready to employ AI capabilities in your workflows to alleviate burdensome tasks that frustrate many clinicians today?

"When comparing VNA options, it is important to assess which class of VNA you need."

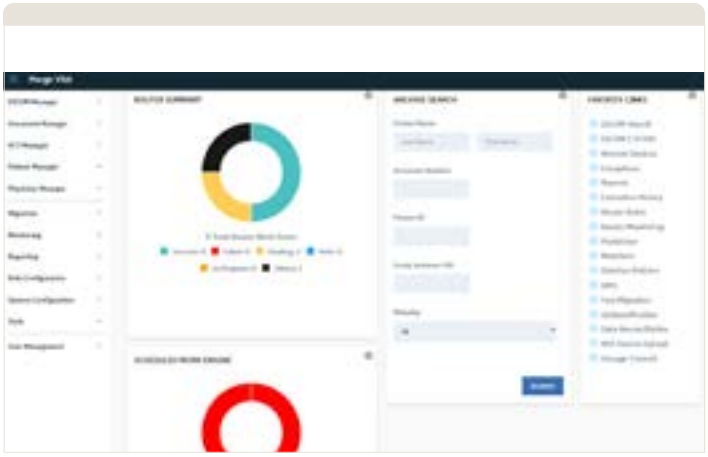
If you are evaluating AI applications to enhance diagnostic completeness and accuracy, know that your systems will require a multi-threaded orchestration engine, something that passive VNAs cannot provide effectively. Furthermore, you should consider support for image lifecycle management. Like any other data, imaging data can be costly to store, so those images which are not needed frequently or beyond a certain timeframe should be handled according to policies that meet your organizations needs.

- 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?

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 and Merge Imaging Suite VNA: offering more

Merge solutions for VNA orchestrate images from across the enterprise, serving as the longitudinal single source of truth. These solutions are truly vendor neutral, enabling ingestion and connectivity with any device, to help organizations avoid cloud-vendor lock-in. As the gateway to cloud, they enable access to AI ecosystems built on interoperability with an enterprise imaging platform deployed in the hybrid cloud.



The Merge portfolio is architected with Merge VNA and Merge Imaging Suite VNA as the backbone for all imaging data. They unify all images for access by Merge Universal Viewer, Merge Workflow Orchestrator, Merge PACS™, and Merge Cardio™.

Differentiators of Merge VNA and Merge Imaging Suite VNA

- Hybrid cloud options offer you the freedom to partner with 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
- Nearly infallible uptime
- Censinet and KLAS security certified to be very mature – with strong security measures built in

When evaluating VNAs from different vendors, ask:

- Can service lines outside of radiology and cardiology be connected with this VNA?
- Can all imaging content across the enterprise be centralized regardless of source or format?
- Can you 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?
- Will you have the flexibility to deploy the system with your choice of on-premise and/or 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 and Merge Imaging Suite VNA can address the needs of organizations from the beginning to advanced stages of their enterprise imaging journey.

Visit our website to learn more about Merge VNA and Merge Imaging Suite VNA.

Feature	Basic VNA	Mature VNA	"More than a VNA"
Basic Data Management			
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		✓	✓
Smarter Data Management			
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			✓
Smarter Elasticity of Infrastructure			
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"
Smarter Client Tools			
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)			✓
Smarter Security and Standards Compliance			
Cloud copy options		✓	✓
Is available in a cloud-native hybrid cloud architecture			✓
Hybrid cloud interoperability enables freedom to partner with on-premise and/or cloud vendors of 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 Merge

Merge empowers healthcare organizations with advanced medical imaging solutions to deliver reliable imaging, less complexity, and better care. Merge is trusted by 6 of the 10 largest U.S. health systems. Merge Imaging Suite, built on a cloud-native foundation, provides capabilities for Vendor-Neutral Archive (VNA), Enterprise Diagnostic Viewing, and Workflow Orchestration. The Merge portfolio also includes PACS, Cardiology, and Hemodynamic monitoring solutions, and support for Digital Pathology.

Learn more at merative.com/merge

About Merative

Merative provides data, analytics, and software for healthcare and government social services. With focused innovation and deep expertise, Merative works with providers, employers, health plans, governments, and life sciences companies to drive real progress. Merative helps clients orient information and insights around the people they serve to improve decision-making and performance.

Learn more at merative.com

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Learn how you can benefit

Merge provides award-winning imaging solutions for radiology, cardiology and enterprise imaging, 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 Merge can help you.