Modernizing Medicaid IT Architecture

Transition gradually to modular systems and shared services

Shared eligibility rules

A common eligibility rules module helps you meet the MITA requirement that modules share 80%-90% of rules.

Integrate MITA modules faster with Red Hat[1]

- 38% more applications developed
- 507% three year return on investment (ROI)
- 40% more API developed
- 43% reduced unplanned downtime

The rewards and challenges of Medicaid modernization

Centers for Medicare & Medicaid Services (CMS) reimburses states up to 90% of their costs to modernize legacy Medicaid systems to the Medicaid IT Architecture (MITA), better known as the Medicaid Enterprise System (MES). Existing Medicaid systems are decades old, costly to maintain, difficult to update, and make the state dependent on a single vendor.

So, why haven't states already modernized their legacy Medicaid systems? Complexity. Legacy IT systems are a tangle of interconnected functions with redundant eligibility rules and spaghetti-like communications channels, such as provider, pharmacy, fraud, third-party liability, decision support, and others. States are concerned the transition to MITA will interrupt these functions and services for Medicaid recipients and their caseworkers.

A modular and incremental approach

Using the right technology and processes, you can transition to MITA incrementally and at your own pace, without disrupting service delivery. As shown in Figure 1, using a MITA-compliant Medicaid system can cause a set of standalone, cloud-agnostic modules for each Medicaid function that shares common application programming interface (APIs) and eligibility rules. Each module operates independently, therefore, changes to one module do not affect the others. The benefit is that developer teams can focus on improving the customer or caseworker experience instead of getting mired in the technology. Additionally, outside developers can specialize in function-specific modules, stimulating innovation and marketplace competition.

Figure 1 Example of a MITA-compliant Medicaid system. Loosely coupled, tightly aligned components share common application services.

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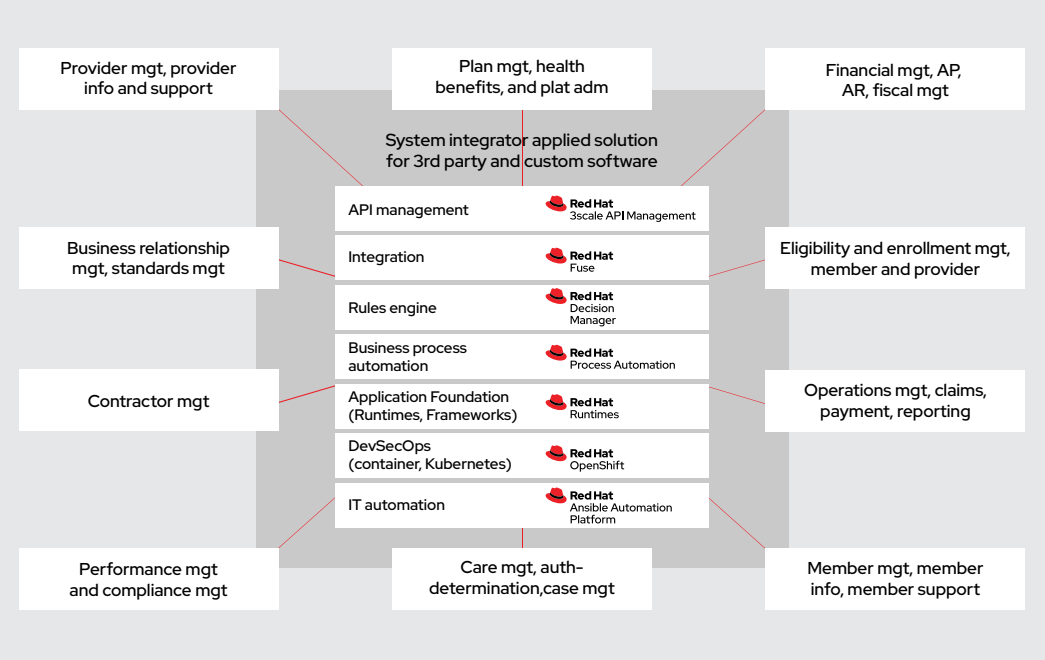
1 IDC White Paper, sponsored by Red Hat. "Red Hat Integration Helps Enterprises Optimize Application Performance and Business Results." Document #US47989320, July 2021.

Red Hat Application Services for Medicaid IT Architecture

- Red Hat 3scale API management
- Red Hat Fuse for integration
- Red Hat OpenShift Platform for DevOps
- Red Hat Runtimes for building cloud-native applications
- Red Hat Ansible Automation Platform for IT automation



Simplify the transition to MITA with Red Hat technologies

Transition to a MITA-compliant MES gradually by using Red Hat® enterprise open source technologies. Begin by deploying a central Systems Integration Platform (SIP), which enforces consistent standards and provides a common API set, rules, and data store. As you modernize each Medicaid function, turn off the corresponding function in the legacy Medicaid system. With a SIP in place, developer teams consisting of your own developers and system integrator partners can build and implement modules—in any order and at your own pace. A SIP includes Red Hat Fuse that simplifies integration between modules and with legacy systems.

Six states (and counting) are already using Red Hat technologies in their MITA initiatives. Table 1 summarizes the implementation.

Red Hat

Table 1. Implementation summary in three steps

Phase 1	Phase 2	Phase 3
Set up the integration platform and DevSecOps software factory.	Connect the modernized module to the legacy Medicaid system using Red Hat Integration.	Build the next modules and repeat the steps in Phase two.
Select the first Medicaid module to modernize (e.g., provider or pharmacy) and build a container-based, cloud-agnostic application on Red Hat OpenShift®.	Establish an operational data store (ODS).	Scale Red Hat Application Services and third-party services as needed.
Implement the Red Hat Application Services needed for the first module (integration, process automation, and runtimes).	Turn off the legacy function that the new containerized application replaced.	Improve or replace modules as business needs or technologies evolve.
		Use artificial intelligence and machine learning (AI/ML) to gain insights from the common data store—to improve outcomes or fraud detection.

Compliance with Fast Healthcare Interoperability Resources (FHIR) standard

MES built with Red Hat technologies comply with the Health Level Seven (HL7) Fast Healthcare Interoperability Resources (FHIR) standard. HL7 FHIR allows safe access to clinical and administrative healthcare data and information to people who have a right to access it for patient care.

Revive Medicaid system efficiently and stay flexible with Red Hat technologies

Modernize at your own pace. Build containerized Medicaid modules in any order, bringing in Red Hat Application Services as you need them. Reuse shared services for subsequent Medicaid modules, saving time and taxpayer dollars.

Work with your vendor of choice and deploy on any platform. Cloud-native software runs on any public cloud (including AWS, GCP, and Microsoft Azure) or on-premise. For instance, you could deploy the modern Pharmacy module in a public cloud, integrating it with the legacy Medicaid system on-premise and a cloud provider's financial software that's offered "as a service." Move any module to another cloud whenever it's helpful—for example, pricing or service changes.

Adapt to new legislation in less time with faster release cycles. DevOps methods and Red Hat automation tools automate testing, security checks, and deployment, helping you adapt to new Medicaid requirements more efficiently.

Gain new insights with AI/ML. Legacy Medicaid systems have separate data stores for each function. With a modern architecture, all functions share a common data store, allowing you to connect the dots to gain new insights, such as fraud indicators or effective healthcare interventions for different populations.

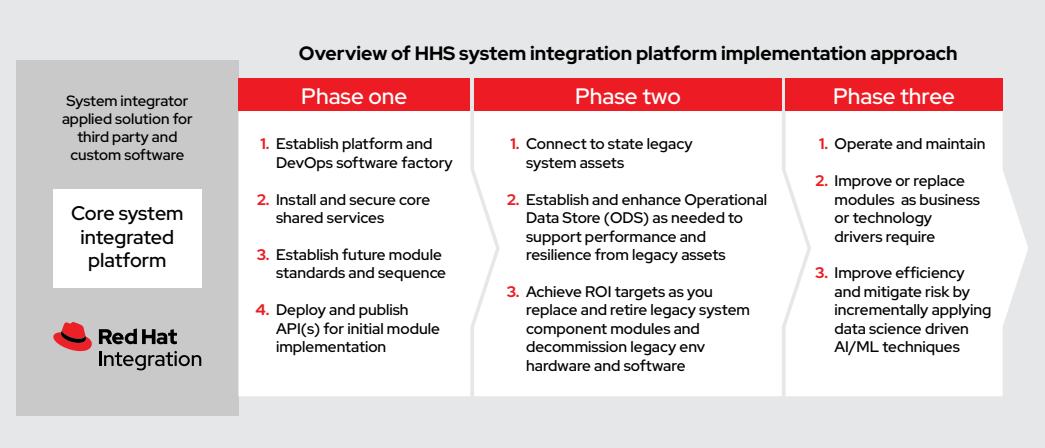
Preserve institutional knowledge. DevOps simplifies knowledge transfer because each microservice is clearly documented.

Take the next step toward MITA

To experience the advantages described in this brief, write your request for proposal (RFP) for the Medicaid Enterprise System and specify:

- Loosely coupled, tightly aligned API-based architecture.
- Cloud-agnostic containerization and Kubernetes platform.
- Cloud-native modules to avoid vendor lock-in.
- FHIR compliance.

To learn more, visit www.redhat.com/slg.



About Red Hat

Red Hat is the world's leading provider of enterprise open source software solutions, using a community-powered approach to deliver reliable and high-performing Linux, hybrid cloud, container, and Kubernetes technologies. Red Hat helps customers develop cloud-native applications, integrate existing and new IT applications, and automate and manage complex environments. A trusted adviser to the Fortune 500, Red Hat provides award-winning support, training, and consulting services that bring the benefits of open innovation to any industry. Red Hat is a connective hub in a global network of enterprises, partners, and communities, helping organizations grow, transform, and prepare for the digital future.

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