



HealthCare
Solutions®

Cerner Testing and Code Management Assessment

Solving major testing challenges in Cerner's complex software environment

The Business Issue

While Cerner Millennium offers a healthcare computing platform that promotes safety, quality, and efficiency, its complex software environment can present major testing challenges. Activities such as code updates, reference database changes, software interdependencies, and domain management may affect system uptime and the perceived stability of the system. As more applications are added, code management becomes even more complex, with many organizations concluding they have a 'testing problem'.

Cerner has made significant strides in simplifying its code distribution tools and quality. Automated testing packages are now available that allow standardized regression testing for new releases, and Millennium's code quality has improved. However, the system continues to be challenging to administer. It contains millions of lines of modular code, and its configuration options allow each site to make choices that frequently create unique and potentially untested database configurations.

To maintain a supportable code base, it's essential to stay current with Cerner's releases. These, issued at intervals of 18 to 24 months, often change the code significantly. Between release upgrades, each site must implement cumulative code 'support packages' issued on a regular basis to keep the application to the current release. All these variables add up to a volatile environment for testing and validation.

The multiplicity of choices related to Millennium testing and code management have a major impact on the IT department. Each release upgrade generally requires up to six months of regression testing before the code can be moved to production. A significant number of the IT support staff can be tied up in the regular maintenance of code. Reducing the time and staff involved in testing tools and techniques can mean substantial savings for your organization, while improving testing quality decreases undetected errors and associated risk.

The CTGHS Answer

CTG HealthCare Solutions (CTGHS) offers a complete array of Cerner services, backed by over twenty years of experience in enabling healthcare organizations to use technology effectively to achieve their clinical and financial goals. Leveraging our focused Cerner expertise, we can help you significantly improve your Millennium testing processes. Exemplar®, our proven testing and code management methodology, enables you to maximize Millennium's performance while minimizing support requirements. Exemplar is scalable to your organization, and uses proven best practices within a configurable architecture to apply consistent processes.

Our testing and code management services begin with a thorough independent evaluation, from testing strategy through execution. On-site, our experts collect relevant information using a combination of



documentation review and interviews with client staff. We draw on our extensive Cerner knowledge and other Cerner clients' comparative processes to establish benchmarking and broad practice standards.

Our assessment examines:

- Testing methodology (unit, integration, regression and stress) and all other aspects of the release upgrade process
- Test cycle planning
- Test scripts, including a review of sample scripts to verify the appropriateness of integration points and levels of detail
- Project approach and coordination, including the evaluation of staging the software for the move to production
- Domain management strategy

The assessment deliverables include:

- A formal Report of Findings that includes recommendations for:
 - *Process improvements*
 - *Opportunities to streamline processes*
 - *Testing best practices*
 - *Domain strategies*
- A remediation action plan and priority dashboard
- Benchmarking best practices

Benefits

CTGHS' Cerner Testing and Code Management Assessment Service delivers benefits that include:

- **Improved testing efficiency:** The testing process is revised to make it easier and faster.
- **Reliable results:** When tested code is moved to production, the impact is exactly as anticipated.
- **Repeatable process:** The same approach produces the same results for every release upgrade.
- **Cost savings:** Internal maintenance costs are lower.
- **Improved user satisfaction**

Our Commitment to Quality

CTGHS ensures consistent delivery of the highest-quality services by equipping exceptional, experienced consultants with proven, repeatable methodologies, best practices, and toolsets honed over 20 years—all monitored by our independent Quality Management Office.

The ultimate measure of quality is awarded by our clients. CTGHS ranked second in Overall Performance for professional services firms in the December 2008 KLAS* "Top 20 Best in KLAS" Awards. Of the 77 professional service firms that participate in KLAS, only 11 qualified to be ranked in this category. In the KLAS "Maximizing Your Consulting Investment: A Report on Healthcare IT Consulting Services," February 2009, CTGHS shared the highest Overall Firm Score of Full-Service Firms.

CTG helps healthcare institutions and related organizations maximize the potential of their information systems to achieve their financial and clinical objectives. Our consulting, clinical, financial, advanced technology, and IT management solutions resolve high-priority IT issues and provide significant return on investment for our clients. CTGHS is recognized for our ability to mobilize healthcare and IT expertise, to deploy our proven Exemplar® methodologies, and to draw upon our corporate knowledge base in a client-responsive and cost-effective manner.

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