

Introduction

Today's technology-centric companies have begun to recognize the benefits provided through monitoring their computing infrastructures, but deciding how to go about implementing this monitoring is often a point of conflict: Managers, developers, and system administrators see their environment's monitoring needs from very different points of view, and it can be difficult to create a solution that meets all the needs of a given organization.

YJT has developed a methodology for designing and implementing monitoring solutions that work for the organization as a whole, and which are customized to provide the best combination of accuracy, coverage, usability, and efficiency for the organization.

Choose a Tool

The core of YJT's monitoring solution is based on our partnership with Nimsoft. Nimsoft's NMS product is modular, extensible, enterprise-level software based around a reliable message bus architecture that makes it best in class.

We have built custom additions on top of the Nimsoft foundation increase functionality and allow us to address further problem types. In addition, we are always open to working with other tools, and have the ability to integrate existing client tools into a single, cohesive solution.

Strike a Balance

There are two major schools of thought around how to configure monitoring effectively:

1. Monitor and measure everything possible
2. Only monitor the most important, critical pieces

Both have merit: Monitoring everything possible is usually motivated by a desire to catch every potential problem, while limiting it to only critical pieces reduces excess noise, and lends more weight to the alerts that are allowed to pass through.

YJT attempts to balance both of these approaches to establish a middle ground, and uses an iterative system to constantly tailor and improve this balance over time, resulting in an ideal level of effectiveness.

Determine the Approach

YJT's approach to system design remains flexible, and a number of common patterns have been defined to assist with choosing the best design for every situation:

- YJT-Hosted (co-located, redundant, robust)
- YJT-Hosted, with 1 or more dedicated client hubs
- Client-Hosted (using existing infrastructure, if desired)
- Cloud-based Hosting

In addition, YJT always strives to find the most productive method for responding to alerts:

- Routed to and handled via YJT's NOC
- Handled via YJT but mirrored to the client
- Handled via YJT but escalated to client resources when appropriate
- Routed to client's support team
- Selective combination of these approaches

Decide What to Monitor

YJT has developed a comprehensive list of metrics and templates for use in monitoring configurations. Our general approach covers the range from lower-level infrastructure, through networking and server health, all the way up to application-level metrics:

- Power consumption and state via UPS devices
- Environment conditions (temperature, humidity) via dedicated device or existing client gear
- Network Infrastructure connectivity, health, logs, and performance metrics
- Server connectivity
- Server hardware status (temperature, drive state, memory module state, PSU state)
- Server health (system logs, resource consumption of CPU, memory, and disk)
- Storage systems and Virtualization environment health
- Application metrics (up/down, process resource consumption, log file errors and metrics)
- Custom details (e.g. logged-on users, message rate, message contents, other-as-needed)

YJT has experience working on many platforms, including Windows, Linux, Solaris, HPUX, AIX, and iSeries. We will design a solution that includes monitoring of third-party applications (Exchange, SQL, etc), third-party integrations (Tomcat, WebSphere, etc), and, often most-importantly, proprietary applications.

Confirm the Results

A monitoring solution should ultimately produce significant, measurable results over time. YJT looks at several metrics when determining how successful a monitoring implementation is:

- Improved uptime
 - Through proactive addressing of potential future issues
 - Through immediate notification and response to urgent issues
 - Through reduced recovery time, as a result of inherent root-cause analysis
- Increased operational visibility and awareness through near-real-time dashboards
- Increased executive-level visibility through combined, high-level dashboards and single pane of glass visibility
- Ability to perform effective bottleneck identification
- Ability to use trending data to make better-informed decisions about future capacity planning
- Ability to identify deviations from baseline metrics to recognize trends over time

Get an Edge

YJT brings uncommon skill and experience to the monitoring space on a variety of levels. We find that our clients particularly value our strengths in the following areas:

- Willingness to understand both business and technical goals of an organization
- Ability to deliver quickly, effectively, and accurately
- Ability to correlate alerts from disparate sources, and use this to reduce unnecessary noise
- Identification of opportunities for process automation and streamlining of operational workflow
- Ability to customize data integration methods to deliver consolidated views of disparate sources
- Ability to build integrations between monitoring and other systems (CRM, email, chat, etc)
- Integration of step-by-step response procedures for all alert notifications to ensure consistent, uniform response by all engineers
- Ability to script automated responses to recurring problems