

Предпосылки и тезисы

1. Контролируемые системы состоят из весьма большого числа объектов, каждый из которых может иметь сложную компонентную модель. Для быстрой диагностики достаточно контролировать ряд ключевых макропараметров. + опираемся на методологию USE.
2. Ключевыми для оценки работоспособности системы с точки зрения пользователя являются метрики, связанные с доступностью того или функционала интерфейса и временем отклика на операции.
3. Компоненты решения должны иметь слабую связь, позволяющую весьма оперативно заменять одни компоненты на другие. Упрощение решения в угоду переносимости и сокращения затрат.
4. Нет смысла забираться на поляну, которая занята (open-source или конкуренты) или в которой легко воспроизвести результаты. Даже не совсем точная реализация математических моделей позволит построить боевую риторику и дифференциацию от бесплатных или тривиальных продуктов. Мат модели, вынесенные во внешний функционал, всегда можно безболезненно подкрутить без изменения основного кода и логики.
5. Двигаться надо от простого, но эффективного и эффективного к сложному. Сложные алгоритмы могут
 1. оказаться медленными.
 2. оказаться не всегда применимыми.
 3. не давать существенной выгоды в применении.
6. Важен красивый и быстрый пользовательский web-based интерфейс.

Cool Vendors in Application Performance Monitoring and IT Operations Analytics, 2014

- [Metafor Software](#) Detect the anomalies that matter – automatically and in real time. Analyze the behavior of millions of logs and metrics of any type from any data source. Get alerted at the earliest sign of a problem so you can fix it immediately; no threshold or rule setting required.
- [NetMotion Wireless](#)
- [Nextthink](#) is the innovator of End-user IT Analytics for security, ITSM and workplace transformation. Nextthink maps all the IT services, how they are being consumed, and how the IT infrastructure is operating, from the only perspective that matters most, the end-users (workers). Nextthink provides essential visibility and insight into IT operations and security for IT Governance.
- [Sumo Logic](#) is a Scalable, Service-Based Log Management.
- [ThousandEyes](#) Monitors Complex, Distributed Networks Enterprise IT, online operations and network security teams use ThousandEyes to diagnose and instrument their internal and external networks in order to improve application performance and reduce service interruptions.

Cool Vendors in Application Performance Monitoring, 2013

- [AppNeta](#). Full-stack monitoring for web applications: code, network, and end user.
- [Critticism](#) is the leading mobile application performance management solution. Criticism offers a complete view into crashes, services, and mobile transactions.
- [ExtraHop Networks](#)
- [Kataskopeo](#)
- [Renesys](#). Dyn Internet Intelligence. Provide the best possible online user experience by monitoring and analyzing your Internet performance.

Cool Vendors in Application Performance Monitoring, 2012

- [AppFirst](#)
- [BlueStripe Software](#)
- [Lucierna](#) ([SmartBear Software Acquires Lucierna](#)) tracks every transaction from the end user across all tiers—including end user, network, web server, and back end tiers—to provide full visibility. It provides detailed information about each transaction, including business context, performance, availability, and SLA compliance.
- [Moogsoft](#). Moogsoft's flagship product, [Incident.MOOG](#), is an IT incident early warning and collaborative remediation system used by web-scale enterprises and service providers within IT Operations Management (ITOM), IT Service Management (ITSM) and DevOps teams. Using patent-pending machine learning technology, Incident.MOOG automates the early detection of service failures, reduces the noise without dependence on preset rules or models, creates contextualized situations and then orchestrates rapid restoral of business services.

Остались за бортом

- [RightNow](#) The IT Operations Management Solution
 - [FireScope](#)
 - [Evanios](#)
 - [CorrelSense](#) enables enterprise IT teams to efficiently isolate and diagnose performance problems in real time and provides in-depth analytics to promote continuous improvements in both performance and user experience.
 - [RightAnswers](#) brings you SmartService™, a whole new way of managing and delivering knowledge that enables you to provide frictionless and consistent support experiences.
 - [Evolven's](#) IT Operations Analytics provides intelligent answers to key IT operations challenges: how to accelerate incident resolution, how to avoid harmful and risky changes, and how to assess and optimize IT operations performance.
 - [SmartBear](#). AlertSite UXM - monitor applications and APIs with code level visibility
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Фреймворки и платформы для разработки

1. [AngularJS](#) или [AngularJS ru](#). Почему вам [НЕ](#) стоит использовать AngularJs
2. [ReactJS](#)

SparklineJS

- [jQuery Sparklines](#)
- [amCharts](#) Micro Charts & Sparklines

Event Processing

- [WSO2 Complex Event Processor](#)
- [Esper](#)

Примеры комплексов на базе фреймворков и компонентов

- [Fluentd](#) is an open source data collector for unified logging layer. Aggregate and Analyze Syslog with InfluxDB.
- [logstash](#) is a tool for managing events and logs.
- [Graphana](#) is an open source, feature rich metrics dashboard and graph editor for Graphite, InfluxDB & OpenTSDB.
- [Treasure Data](#) provides a cloud-based, managed service for data and analytics, helping businesses get value from big data in days, not months. [QuickStart](#)
- [ElasticSearch](#) visualize logs and time-stamped data.

Доп. материалы

- Алгоритмы прогнозирования. Онлайн книга [Forecasting: principles and practice](#)
- Библиотеки для прогнозирования метрик на основе теории очередей. [Guerilla Capacity Planning](#)
- Библиотека визуализации [D3.js](#). Онлайн книга [Interactive Data Visualization for the Web](#),
- [Over 2000 D3.js Examples and Demos](#)
- Спарклайны с [D3.js](#): [Angular.js Inline Visualization with D3.js](#)
- [Sparkline Examples](#)
- Визуализация Time-Series в [D3.js](#): [Focus+Context via Brushing](#)
- [15 лучших JS библиотек для построения диаграмм и схем \(дек.'14\)](#)
- [AngularJS vs. Backbone.js vs. Ember.js](#)
- Wikipedia: [Comparison of JavaScript frameworks](#)
- Time Series, метрики и статистика: [знакомство с InfluxDB](#) (блог компании Selectel)

Полезные ссылки

- Визуализация [Graphite](#)
- Коммерческое Cloud решение [HostedGraphite](#)
- БД для хранения временных рядов [The Scalable Time Series Database](#)

- БД для хранения временных рядов [InfluxDB](#). An open-source, distributed, time series database with no external dependencies.
- The free web debugging proxy for any browser, system or platform [Fiddler](#). [Статья](#) с Habra
- [SoapUI](#) is a free and open source cross-platform Functional Testing solution.
- [Kieker](#) provides complementary dynamic analysis capabilities, i.e., monitoring and analyzing a software system's runtime behavior — enabling Application Performance Monitoring and Architecture Discovery. The internal behavior of large-scale software systems cannot be determined on the basis of static (e.g., source code) analysis alone.

[How to make a choice between OpenTSDB and InfluxDB or other TSDS?](#)

Системы мониторинга и инструменты

- [Ganglia](#)
- [Metrics](#) is a Java library which gives you unparalleled insight into what your code does in production.
- [Netflix Open Source Software Center](#). [Blog](#)

Блог записи

- [Measure Anything, Measure Everything](#)
- [What is the difference between Artificial Intelligence, Machine Learning, Statistics, and Data Mining](#)
- [R Is Still Hot – and Getting Hotter](#)