I know what changed... do you?

Unknown Changes Are Hurting You - We Track Them Down
What Changed?

Change has been cited as a true root cause for most performance and availability issues. In fact, Gartner recently estimated that 85% of all such issues can be attributed to one or several change types: configuration, data, code, capacity or workload. So, then it comes as no surprise that one of the first questions asked when facing an incident is “what changed?”

Considering this, it’s really amazing that most incident resolution and prevention effort and time focuses only on investigating “symptoms” (monitoring alerts, log errors, performance data trends etc.), rather than the actual changes – the true root-causes. Such focus leads to reactive, firefighting practices that IT has followed for years, resulting in long troubleshooting time and too many incidents.

Finally, A New Approach

Evolven helps production support and operations teams to identify changes and differences that caused an incident, or predict which ones will impact future issues. The details of actual changes and differences are detected by deep data collection within and across IT environments, from application to infrastructure layers, at the most granular level.

By applying machine learning analytics, Evolven calculates risk or the probability that an incident can be caused by any change or difference. To enhance this analysis, Evolven can correlate changes with alerts from existing monitoring tools as well as deployment automation tools and service desks. This provides production support and operations teams the actionable insights to slash mean time to resolution and cut the number of incidents that they face, while maximizing the quality of business services and reducing “firefighting” efforts.

1. Change Centric
2. All Relevant Data Sources
3. Powerful Analytics
4. Less Issues, Faster Resolution, More Efficiency
How It Works

Deep Data Collection
Agents automatically collect initial state and sequential changes, with minimal resource consumption.

The agents scan end-to-end environment configuration, content, application master data, capacity settings etc. from applications to software infrastructure to infrastructure in on-premise physical or virtual data center, or cloud. The information collected is at its most granular form including: individual configuration parameters, master data values, lowest database schema elements, registry keys, application files checksums and versions.

With all this information, Evolven can detect a wide range of changes over time (configuration, code, data, capacity and workload) and differences across environments or environment components.

Data Blending
Evolven extracts valuable insights directly from the collected data (what changed, what’s different, anomalous and irregular changes, undesired inconsistencies etc.)

Further, Evolven can provide additional types of insights using existing operational data collected by other IT solutions (e.g. are there unauthorized changes, which changes were done manually, which changes caused a monitoring alert etc.)

Evolven imports two key types of external data:
- Symptoms that indicate undesirable conditions in system behavior and health. Such symptoms could be Application Management (APM) alerts, system alerts, network alerts, log based alerts/KPIs etc.
- IT Context that describe the activities carried out or planned by IT. This includes, for example, infra and application changes coming from Deployment Automation, change requests from Service Desk, dependencies and topology from CMDB.

Machine Learning Based Analytics
Evolven turns data collected by Evolven and imported data into actionable insights. First, Evolven consolidates, cleans and correlates all the data. Then it assesses risk of changes over time and differences across environments.

Evolven calculates risk and probability for each change/difference dimension and blended data sources, by applying:
- Machine Learning based algorithms (time anomaly detection, loneliness assessment, change frequency etc.)
- Out-of-the-box and custom knowledge base and SME input to fine tune analysis
- Heuristic algorithms (e.g. change consistency assessment)
Use Cases

Accelerate Troubleshooting

Evolven applies machine learning to analyze actual changes and differences then correlates them with monitoring alerts, and IT management data.

Evolven delivers production support teams with actionable insights and a prioritized shortlist of changes, inconsistencies and drift responsible for incidents.

Detect Risky Changes Before the Trouble Starts

Evolven assesses risk and probability of detected actual changes and differences that may cause an incident. Alerts are triggered when any risky changes are identified, such as unauthorized changes that do not correlate to any approved change request, changes implemented inconsistently, manual “break-the-glass” changes, anomalous and irregular changes.

Automatically correlate actual changes with incidents.

Machine learning insights explain potential root-cause in natural language.
Manage Consistency
Evolven detects differences between environments along the business system lifecycle (pre-production, production, DR) and within environments (e.g. consistency of a server cluster). Evolven analyzes and prioritizes consistency issues, allowing users to focus on the ones that present the highest risk to stability.

Detect Environment Drift
Evolven tracks and reports deviations from a “golden baseline” of the environment state (captured at any point) or from a reference environment.

Verify Policy Compliance
Evolven allows you to define a set of policy rules defining a desired state of environment. This can include configuration parameter values, application file versions, availability of certain database schema elements etc. Evolven continuously verifies IT environments against the defined policies in order to report violations.
Architecture

Evolven is delivered either using Software-As-A-Service (SaaS) or on-premise models based on security requirements and policies.

Agents

Evolven collects granular information using Agents. The Agents send collected data to the Evolven Server via an HTTPS connection or save it as a local file for later import into the central repository. The Agents are armed with a number of fail-safe mechanisms, protecting resources of the scanned environments. For example, you can cap the CPU resources available for the Agent during a scan. The Agent then will monitor itself, pacing all the queries to not exceed the defined CPU threshold.

Agents are available in several operation modes: local, remote and standalone (suited to environments that are isolated from the central network).

Integrations

For deeper insights, Evolven integrates out-of-the-box with various existing IT Monitoring, IT Management and Automation tools. The integrations are bi-directional, allowing for data to be streamed into Evolven as well as feeding analytics insights into the integrated tools.

Analytics Engine

The Evolven Analytics Engine handles agent management, data processing and analytics, and UI requests. All the collected data is stored in a central database.

User Interface and Reporting

Evolven provides an interactive web-based UI. In addition, insights generated by the Evolven Server can be distributed as offline reports or alerts delivered as an e-mail or through any other means used by an organization for IT operations alerting.
Faster MTTR
Fewer Incidents

Evolven helps IT organizations to prevent performance and availability incidents and accelerate troubleshooting across the lifecycle of business systems. Using Evolven as an integral part of your release and deployment processes, you can improve the quality of releases while cutting time-to-market:

- **Up to 50% faster mean-time-to-resolution**
- **More than 35% decrease in the number of incidents**
- **Reduction by 25% for a release time-to-market**
- **75% less manual effort spent on auditing activities**

These improvements substantially impact IT delivery, support and operations costs, eliminating manual environment verification activities, getting rid of non-productive time due to issues and reducing the cost of handling issues by IT specialists.

Saving specific bottom line costs, Evolven also helps you:

- Improve quality of services and customer experience
- Transition from a reactive mode of operation to a preventive mode, freeing up time from valuable resources to focus on more strategic projects
- Avoid compliance and security issues by automatically detecting unauthorized and undesired changes
- Operate through a single pane of glass by avoiding unknowns and drastically reducing operational risks
About Evolven

Evolven is a recognized IT Operations Analytics (ITOA) leader and was selected by Gartner as a Cool Vendor in IT Operations. Evolven is also the winner of the Red Herring Top 100 North America, TIE 50 Top Startup, 20 Most Promising Data Center Solution Providers, Banking CIO Outlook and ITOA50 awards.

“Since implementing Evolven in our operations, Aegon has seen improvements to consistency and stability.”

“Thanks to Evolven, operations activities that took weeks now take hours or less.”

“Evolven has made us a more reliable partner for the business side.”

Mark Nowee
Middleware Competence Center Manager

David Chivers
VP CIO

Peter Philipsen
Manager of Application Delivery & Support

Contact Us

For a free demo: 1-888-841-5578 (US)  |  info@evolven.com  |  www.evolven.com