

Prelert Case Study

Service Provider User Portal Problems

When your business is the outsourced management of large enterprise IT environments, it doesn't look good when you have your own, unresolved IT service problems. Especially when they are obvious to your customers.

So when a managed service provider had intermittent outages in their self-service user portal it was a major source of embarrassment.

The Incident

The incident started with a bang. A number of customers called the help desk complaining about access to the portal. A few had been in the middle of provisioning changes when the portal crashed. Others were experiencing long delays and cryptic error messages when they attempted to log in.

Just as quickly as the incident appeared, it was over. It had lasted just long enough to involve some high profile customers and high level management. Since nobody wanted the incident to reoccur, a problem management team was convened.

The user portal was the product of an internal team of expert Java developers, so it was easy to pull together the appropriate experts.

The good news was that there was a considerable volume of log data available from the servers, Tomcat application servers, Apache web servers and application environment that might contain the answer. Given the considerable volume of data, the team used IBM Tivoli to process the log files to reveal relevant error conditions.

Three developers spent 3 days examining the output from Tivoli and scanning the logs themselves but were unable to isolate a cause of the outage. Since the problem seemed to be transient, they eventually had to return to their development and customer service roles and pray the problem didn't reoccur.

Naturally, it did. Multiple times over the next

Apache Tomcat Restarts

month the incident was repeated. More customers were affected. A managed service provider that staked its reputation on effectively maintaining robust service levels had a nightmare on their hands. An intermittent, incident was affecting end user services and they had no idea what was causing it.

Prelert's Solution

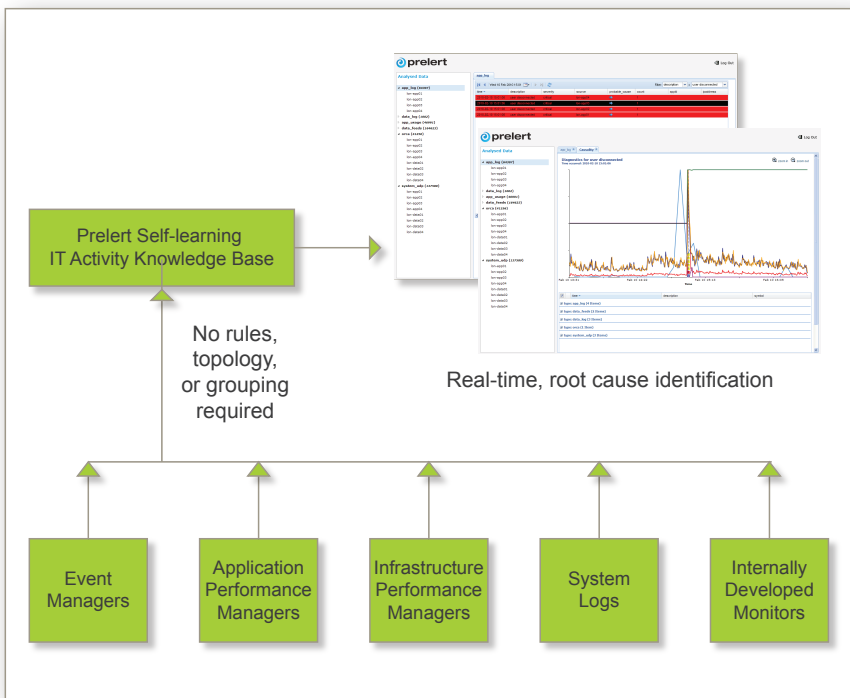
Prelert's advanced analytics operate on your existing management data. We automatically identify 'features' such as events, log file entries, and performance spikes. Leveraging recent advances in computational mathematics, we then compare every feature we find across your IT environment to detect patterns that denote relationships or 'activities'. These activities describe how various components of your environment interoperate to provide an application or service.

Finally these activities are ranked on a 'heat' scale depending on the likelihood of the activity and the degree of anomalous behaviors comprising the activity. Prelert users drill down on 'hot' activities to uncover the sequence that leads up to a service disruption.

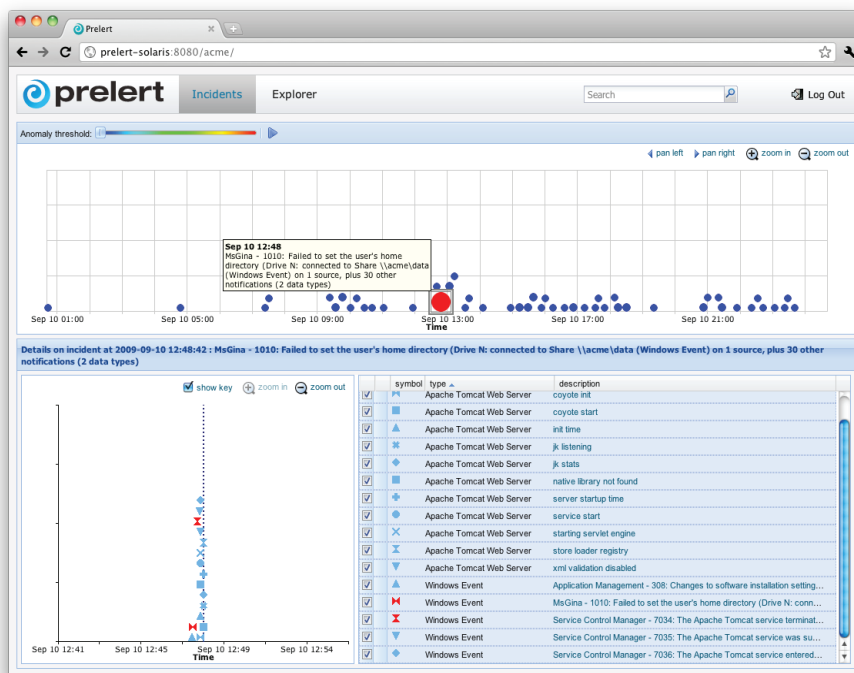
The Root Cause

Prelert was fed the same log files that Tivoli had processed and that the Java developers had been examining for weeks. In minutes, Prelert had isolated the root cause.

An applet had been writing a user configuration



Prekert takes data feeds from existing management systems and automatically provides a time series narrative of the causal events behind service degradation issues



change to one of the servers. This would be noted by a 'Changes to software installation settings were applied successfully' log entry in the server logs. The configuration change temporarily prevented access to a network drive that was used by another Java applet in the User Portal, due to a change to the user authentication credentials. The application did not handle the failure correctly and hung a critical portion of the portal code. This resulted in complete failure and restart of the web server that interrupted existing connections to the User Portal (causing users to lose unsaved changes) and made access impossible until the system recovered.

Two factors led to the failure of the existing process to isolate the problem cause. First, Tivoli and the users were looking for an error condition. Since the root cause indicator was a successful configuration change, they were not going to find it using their existing approach.

Second, the change did not cause a problem until the portal code attempted to write to the non-existent directory. A variable time delay was occurring that only advanced analytics would uncover.

Summary

Today's complex application environments have equally complex failure modes. Increasingly, the cause of these problems cannot be detected by management systems developed in the '80s.

Prekert integrates with existing management systems and uses advanced 3rd generation self-learning algorithms to isolate root cause in real-time.

Prekert users gain improved availability and performance of business critical services while reducing costs and leveraging existing investments.

Contact us today to see what Prekert can do for you

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