

## Case Study:

# Applying Automation to Simplify Network Operations

FXCM inc. (NYSE:FXCM) is a leading online provider of foreign exchange (forex) trading and related services to retail and institutional customers world-wide, Applied indeni's automation capabilities to enhance network operations.



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FXCM (Forex Capital Markets), founded in 1999 in New York, is an online Foreign exchange broker and with offices across the globe, including Hong Kong, London, Tokyo, Paris, Berlin, Sydney, Dubai, Milan, Athens, and Chile. The company provides services through its own online trading platforms and third party platforms. FXCM also owns the Forex trading news and research web site, DailyFX.

## Background and FXCM's Environment

FXCM was introduced to indeni at Check Point Experience in Washington DC and a POC was kicked-off in cooperation with the company's IT team a couple of months later.

Prior to indeni's deployment, FXCM had several systems in place including Nagios, Check Point SmartView Monitor, NMIS network monitoring, as well as several home grown tools which were used for monitoring the company's network and firewall estate. FXCM's network is comprised of roughly 200 routers and switches distributed across their different global locations and their 3 Data Centers, as well as 20 firewalls. Today, all of the company's global network devices are covered by indeni.

## indeni's Value Was Instantly Visible

One of indeni's initial discoveries occurred right after FXCM installed its first batch of Check Point firewalls. indeni pointed out that in two of the firewalls which were added, a user had logged on remotely and left the console open. "As our first impression, that was a great way to start us off on the right foot. It really showed us the type of monitoring indeni was able to offer." Seth Lyons, Senior Systems Engineer.

According to Seth Lyons, "When we first brought in the Check Point firewalls we also found another amazing alert. indeni pointed out that one of our clusters had failed over, but also that the packets were not incrementing following the fail over, and that they were actually still incrementing on the primary firewall. indeni then pointed out that we should check the configurations on the switch. It turns out that using ClusterXL is great but getting the configurations right, especially on the switch side gets pretty complex."

Here is the specific alert received from indeni:

*RX traffic drastically reduced post fail over, possible ARP issue*

**Description:**

*A fail over was identified at Device time: Sep 18 00:31 2013 UTC, indeni time: Sep 17 20:31 2013 EDT. This device is now the active member of the cluster and in the period immediately following the fail over (3 minutes more or less) it received 0 packets compared to 2067098 packets that were received by sfdc-wanfw1 (172.11.129.1) in a similar amount of time immediately BEFORE the fail over. This indicates the possibility that the surrounding network equipment may not be aware of the fail over on the layer 2 level.*

**Manual Remediation Steps:**

*It is possible this is caused by the fact that during a fail over the responsibility for the virtual IPs moves from one cluster member to the other and the MAC addresses change. ClusterXL issues gratuitous ARPs to deal with this but it may not work with your equipment. Please review SK50840 for more information.*

"Again, this was really remarkable. The details of the alert and the in-depth visibility we got from indeni went way beyond our expectations!", adds Lyons.

“ We can do both configuration management and monitoring with indeni but it's the type of monitoring that we have not seen anywhere else. ”

Ryan Leonard, CIO

**Organization:**

FXCM (Forex Capital Markets)

**Industry:**

Financials/FOREX

**Business Challenge:**

Automation and bridging the gap of visibility (or lack of it)

**Benefits Delivered:**

- Automating checks and configuration compliance
- Detailed remediation steps
- Tools consolidation

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## The Deciding Factor: indeni's Cisco Coverage

For FXCM's CIO, Ryan Leonard, one of indeni's major advantages is its ability to consolidate many tools into one platform. "We can do both configuration management and monitoring with indeni but it's the type of monitoring that we have not seen anywhere else." Leonard highlights the following: line protocol being down, identification of overlapping routes, and seemingly simple things, such as checking for Proxy ARPs being enabled, as well as the fact that indeni takes into account a whole array of consideration and exclusions in the backend. "I really love the basic stuff that you'd think other systems would have covered - but don't - things like "NIC duplex set to half", says Leonard.

## Dealing with the "Basic Stuff"

Senior Systems Engineer, Seth Lyons, describes how FXCM's networking team experienced an ongoing problem with one of their Polycom phones whose service/connectivity issues seemed to be 'part of the status quo.' However, after deploying indeni, the team discovered that on the router end, the NIC it had been communicating with had the wrong configuration and was the cause for the sporadic (mis)behaviors on the Polycom's end.

"We realized there was an issue with the Polycom but couldn't figure out what was happening. It would exhibit very sporadic behavior. In retrospect, after discovering the cause, it makes perfect sense! I think this is a great example of why every organization needs automation."

Lyons sums this up as "yet another one of those great indeni 'catches'."

## In Summary

At the beginning of their engagement, FXCM posed the following challenge to the indeni team: "If we ran the POC and fixed everything indeni found, why do we need you guys in the long run?" However, after continuing to deploy indeni, the answer became self-evident: even the most competent teams make mistakes and because networks are dynamic - it's reassuring to know indeni's automation tool 'has our back'.

Now in production, the FXCM team has divided their devices by network devices (routers and switches) and by firewalls and set up indeni for emailing. FXCM also employs additional indeni functionality, such as Device Profiles and Inventory management tools.



## About indeni

indeni is entrusted by enterprises around the globe to keep their networks running smoothly 24/7/365.

Founded in 2009 by a team of network security experts, indeni is reshaping the way complex networks are managed. Unlike standard up/down solutions, indeni is built on Dynamic Knowledge - giving enterprises a way to future-proof their ever-evolving network.

indeni lets you automate error checking, prevent configuration mistakes and pre-empt dormant issues months before they cause service disruption. The result: unprecedented network visibility, control and optimism.

Our game-changing Dynamic Knowledge solutions are rapidly winning the attention of Global and Fortune 100 companies - from Telco and Financial organizations to government agencies and SMBs. For more information about indeni, visit [www.indeni.com](http://www.indeni.com) or email us at [sales@indeni.com](mailto:sales@indeni.com).



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