

## ***IT and Log Search as SaaS***

*Transcript of a BriefingsDirect podcast on how IT and log search and analytics are what businesses and MSPs need for server monitoring, application troubleshooting, and network management.*

Listen to the podcast. Download the podcast. Find it on [iTunes/iPod](#) and [Podcast.com](#). Download the transcript. Learn more. Sponsor: [Paglo](#).

**Dana Gardner:** Hi, this is [Dana Gardner](#), principal analyst at [Interarbor Solutions](#), and you're listening to BriefingsDirect.

Today we present a sponsored podcast discussion on efficient ways to keep IT operations running smoothly at the scale demanded of public-facing applications and services.



We'll explore IT search and systems [log management](#) as a service. We'll examine how network management, systems analytics, and log search come together, so that IT operators can gain easy access to identify and fix problems deep inside complex distributed environments.

Here to help us better understand how systems log management and search work, and how to gain such functionality as a service, are [Dr. Chris Waters](#), co-founder and chief technology officer at [Paglo](#). Welcome, Chris.

**Chris Waters:** Hi, Dana.

**Gardner:** We're also joined by Jignesh Ruparel, system engineer at [Infobond](#), a value-added reseller (VAR) in Fremont, Calif. Welcome Jignesh.

**Jignesh Ruparel:** Hi, Dana.

**Gardner:** Chris, let's start with you. How has life changed for IT operators? We have a recession. We have tight budgets. And yet, we have demands that seem to be increasing, particularly when we consider that more applications are now facing the public and are under this large Web-scale demand?

**Waters:** IT never stands still. There are always new technologies coming on line. Right now, we're seeing a really interesting transition, as more applications become Web based, both Internet-oriented Web based applications and Web-based applications provided out of the cloud.

For an IT professional, being able to monitor the health of applications like this and the successful deployment across the [local area network \(LAN\)](#) and the [wide area network \(WAN\)](#) to their local users provides them additional dividend that hasn't been there in the past.

**Gardner:** What sort of requirements have changed in terms of getting insights and access to what's going on within these systems?

### ***More information***

**Waters:** There are several things. There's just more information flowing, and more information about the IT environment. You mentioned search in your preamble. Search is a great technology for quickly drilling through a lot of noise to get to the exact piece of data that you want, as more and more data flows at you as an IT professional.



One of the other challenges is the distribution of these applications across increasingly distributed companies and applications that are now running out of remote data centers and out of the cloud as well.

**Gardner:** As folks start to wrap their minds around [cloud computing](#) and the benefits, there's an inherent risk in being responsible for services that you don't necessarily have authority over. Is this something that you are finding at Paglo? Are customers interested in how to gain insight into systems beyond their immediate control?

**Waters:** Absolutely. When you're trying to monitor applications out of a data center, you can no longer use software systems that you have installed on your local premise. You have to have something that can reach into that data center. That's where being able to deliver your IT solution as [software-as-a-service \(SaaS\)](#) or a cloud-based application itself is really important.

**Gardner:** So, as we're looking to do IT management and network monitoring, we're interested in log management at a higher level abstraction of analytics, the same old tools don't seem to be up to the task.

**Waters:** That's exactly right. They're much more oriented towards managing LAN environments than they are to managing the evolving IT landscape.

**Gardner:** Furthermore, this is not just for remediation and fixing, but audit trails, making sure you know what you have under your purview and what is actually supporting business processes. You can't fix what you don't know that you have.

**Waters:** You can't do any IT at all, if you don't start with a good inventory. And, inventory here means not just the computers connected to the network, but the structure of the network itself -- the users, the groups that they belong to, and, of course, all of the software and systems that are running on all those machines.

**Gardner:** Many vendors that deliver enterprise infrastructure have some very strong tools for themselves, but they don't necessarily extend that across their competitor's environment. So, we need something that is, in a sense, above the fray.

### ***Bringing solutions together***

**Waters:** You've got this heterogeneity in your IT environments, where you want to bring together solutions from traditional software vendors like Microsoft and cloud providers like Amazon, with their [EC2](#), and it allows you to run things out of the cloud, along with software from open-source providers.

All of the software in these systems and this hardware is generating completely disparate types of information. Being able to pull all that together and use an engine that can suck up all that data in there and help you quickly get to answers is really the only way to be able to have a single system that gives you visibility across every aspect of your IT environment.

**Gardner:** As we see more interest in SaaS applications, as we see more interest in mixing up sourcing options, in terms of colocation or outsourcing, cloud providers launching their own applications on someone else's infrastructure, these issues are just going to grow more complex, right?

**Waters:** Nothing in this world ever gets simpler. What you're trying to find are solutions that help you capture all that noise.

**Gardner:** Tell us a little about Paglo. What makes it different? You deliver search for log systems as a service?

**Waters:** That's right. Paglo is different from other IT systems in two significant ways. The first is that at the heart of Paglo is search. Search allows us to take information from every aspect of IT, from the log files that you have mentioned, but also from information about the structure of the network, the operation of the machines on the network, information about all the users, and every aspect of IT.

We put that into a search index, and then use a familiar paradigm, just as you'd search with Google. You can search in Paglo to find information about the particular error messages, or information about particular machines, or find which machines have certain software installed on them. So, search is a way that Paglo is fundamentally different than how IT has been done in the past.

## *SaaS offering*

The second thing unique about Paglo is that we deliver the solution as a SaaS offering. This means that you get to take advantage of our expertise in running our software on our service, and you get to leverage the power of our data centers for the storage and constant monitoring of the IT system itself.

This allows people who are responsible for networks, servers, and workstations to focus on their expertise, which is not maintaining the IT management system, but maintaining those networks, servers, and workstations.

**Gardner:** I suppose that puts the emphasis on the data and the information about the systems and not necessarily on agents or on-premises' appliances or systems.

**Waters:** Exactly.

**Gardner:** Tell me a little bit about how that works. It sounds a little counterintuitive, when you first think about. I'm going to manage my system through someone else's software on their cloud or their infrastructure.

**Waters:** The way Paglo works is that we have what we call the [Paglo Crawler](#), which is a small piece of software that you download and install onto one server in your network. From that one server, the Paglo Crawler then discovers the structure of the rest of the network and all the other computers connected to that network. It logs onto those computers and gathers rich information about the software and operating environment.

That information is then securely sent to the Paglo data center, where it's indexed and stored on the search index. You can then log in to the Paglo service with your Web browser from anywhere in your office, from your iPhone, or from your home and gain visibility into what's happening in real time in the IT environment.

**Gardner:** What about security? What about risks -- the usual concerns that people have with SaaS and cloud?

**Waters:** There are a few aspects there. The first thing is that to do its job the Crawler needs some access to what's going on in the network, but any credentials that you provide to the Crawler to log in never leaves the network itself. That's why we have a piece of software that sits inside the network. So, there are no special firewall holes that need to be opened or compromised in the security with that.

There is another aspect, which is very counterintuitive, and that people don't expect when they think about SaaS. Here at Paglo, we are focused on one thing, which is securely and reliably operating the Paglo service. So, the expertise that we put into those two things is much more

focused than you would expect within an IT department, where you are focused on solving many, many different challenges.

### ***Increased reliability***

Ultimately, I think what people see when they use SaaS offerings is that the reliability they get out of their software goes up dramatically, because they are no longer responsible for operating it themselves or dealing with software upgrades. There is no such thing as a software upgrade for a SaaS service. It's a transparent operation. The same applies to security as well. We are maniacally focused on making sure that Paglo and our Paglo data center are secure.

**Gardner:** Is this just for enterprises, [small or medium-sized business](#), or [managed service providers \(MSPs\)](#)? How does this affect the various segments of the IT installed community?

**Waters:** We see users of Paglo across all aspects of the IT spectrum. We have a lot of users who are from small and medium-sized businesses. We also see departments within some very large enterprises, as well, using Paglo, and often that's for managing not just on-premise equipment, but also managing equipment out of their own data centers.

Paglo is ideal for managing data-center environments, because, in that case, the IT people and the hardware are already remote from each other. So, the benefits of SaaS are double there. We also see a lot of MSPs and IT consultants who use Paglo to deliver their own service to their users.

**Gardner:** Let's go to Jignesh. Jignesh, you have been very patient, as we learn about IT search as a service, but tell me about Infobond. What sorts of issues were you dealing with, as you started looking for better insights into what your systems are doing?

**Ruparel:** As far as Infobond, we have been in business for 15 years. We have been primarily a break-fix organization, moving into managed services, monitoring services.

The first challenge in going in that direction was that we needed visibility into customer networks of the customers we service. For that we needed a tool that would be compatible with the various protocols that are out there to manage the networks -- namely [SNMP](#), WMI, [Syslog](#). We needed to have all of them go into a tool and be able to quickly search for various things.

To give you a very small example, recently we had some issues with [virtual private network \(VPN\)](#) clients for a customer who was using Paglo. We took the logs of the firewalls, plugged it into the Paglo system, and very quickly, we were able to decipher the issue that was taking place with the client that wasn't able to connect.

That would not have been possible, if there wasn't one place where we could aggregate all this information and quickly extract it, either into a reportable format or a customized format. That was the major challenge that we had.

### *Advanced technology*

We basically looked at various solutions out there -- open source and commercial -- and we found that the technology that Paglo is using is very, very advanced. They aggregate the information and make it very easy for you to search.

You can very quickly create customized dashboards and customized reports based on that data for the end customer, thus providing more of a personal and customized approach to the monitoring for the customers. We deal in the small to mid-sized markets. So, we have varied customers -- biotech, healthcare, manufacturing, and real estate.

**Gardner:** Now, you've been able to use this search function for this one-off remediation and discovery types of tasks, but have you built templates or recurring searches that you use on a regular basis for ongoing maintenance and support?

**Ruparel:** Absolutely. Right now, we have created customized dashboards for our customers. Some of them are a common denominator to various sorts of customers. An example would be an Exchange dashboard. Customers would love to have a dashboard that they have on the screen for Exchange and know what the queues that are taking places in the [Exchange server](#), mailbox sizes, [RPC](#) connections, the service latency, and all this kind of stuff. We have an Exchange dashboard for that, which our customers use regularly to get a status update on what's taking place with their Exchange.

We also have it for VMware. These are some things that are a common denominator to almost all customers that are moving with the technology, implementing new technologies, such as [VMware](#), the latest Exchange versions, [Linux](#) environments for development, and Windows for their end users.

The number of pieces of software and the number of technologies that IT implements is far more than it used to be, and it's going to get more and more complex as time progresses. With that, you need something like Paglo, where it pulls all the information in one place, and then you can create customized uses for the end customers.

At the end of the day, I look at it very simply as collecting information in one place, and then being able to extract that easily for various situations and environments.

**Gardner:** So, from your vantage point, going SaaS for these values is not something to consider as a risk factor, but really is an enabling technology factor?

**Ruparel:** Absolutely. There is always going to be that. We are at a stage where SaaS implementations are taking place at a very rapid rate, and that is the wave of the future. Why? Because, if you look at it, what would you need to set up a monitoring system that supports so many protocols in your own network it would be very expensive.

### *Missing pieces*

Not only that, but if you were to take some other piece of software out there, install it in your network, and monitor the systems, it will not be an end-all solution. There will always be pieces missing, because each vendor is going to focus on certain aspects of the monitoring and management. What Paglo is doing is bringing all of that together by building a platform where you can do that easily.

**Gardner:** Let's go back to Chris. Why don't older approaches work? Why wouldn't an on-premise server and appliance approach offer the same sorts of benefits?

**Waters:** There are a couple of issues. Jignesh just touched one of them, which is particularly appropriate to MSPs. Once the people who are managing the data are remote from the systems, then where are you going to put the servers as an MSP, if you want to manage information from multiple clients?

Now you are into the business of having to build out your own data center to aggregate that information, which obviously is costly and involves a lot of effort, not to mention the ongoing effort of keeping all of that stuff alive.

**Gardner:** Well, we've heard this makes great sense for the MSPs, the small and medium-sized businesses, and the ecology of play there. What about the large enterprise? They almost act like their own MSPs. How does this fit with their legacy approach to the log data from these systems and being able to search and index it?

**Waters:** If you look at the IT management landscape, especially for enterprises, what you see is a highly fragmented environment, where each different IT problem has a different system or set of tools that are applied against it.

The beauty of taking search and applying that to IT and log management is that it allows us to pull together in one place data that previously would have been considered completely different disciplines. The data was previously being fed into your network monitoring software, into your IT asset inventory, or into your server management software.

Paglo can take data from all of those different disciplines, and, as you try to solve problems or improve the monitoring or [service level agreement \(SLA\)](#) monitoring that you are doing on your network, within Paglo you've got one place to look. You can look across servers through the network to users in a single consolidated view.

**Gardner:** Jignesh, back to you. You mentioned several important industry segments. A couple of them are under quite a bit of regulation. Is there something about audit trail, search, dashboards, and the SaaS approach that in some way benefits compliance and adherence?

### *Configuration changes*

**Ruparel:** Absolutely. Keeping track of configuration changes on devices is important. Some of the stuff that I am mentioning may not be available at this instant on Paglo, but knowing the infrastructure as I have learned it over the last four to five months on Paglo, I'd say that building such tools is very easy.

They already have a bunch of reports on there that give you a lot of support with various compliance measures, such as [HIPAA](#), [Sarbanes-Oxley](#), and provide reports on that. However, there is still a little bit of work that is required to get to that stage, where the reports are directly targeted towards a particular regulation.

As far as the generic reports that deregulation would require, say audit trails on who logged in, I mentioned to you regarding the VPN issue that I faced. I generated reports on all the users who had logged in via VPN over the last month in a snap. It was very, very quick. It took me less than two minutes to get that information. Having that quick of response in getting the information you want is very, very powerful. I think Paglo does that extremely well.

Definitely there is a huge advantage of having this information collected. As far as generating reports are concerned, that is something that not only Paglo can provide support on there, but Infobond, if you are interested, can provide support on it as well.

**Gardner:** We've talked about some of the qualitative benefits and the benefits of SaaS, but what about cost? It seems to me that the implementation cost would be lower, but how about the general operating cost, Jignesh, now that you've been using this for several months?

**Ruparel:** Let's look at it from two different perspectives. If I go and set things up without Paglo, it would require me, as Chris had mentioned, to place a server at the customer site. We would have to worry about not only maintenance of the hardware, but the maintenance of the software at the customer site as well, and we would have to do all of this effort.

We would then have to make sure that our systems that those servers communicate to are also maintained and steady 24/7. We would have multiple data centers, where we can get support. In case one data center dies, we have another one that takes over. All of that infrastructure cost would be used as an MSP.

Now, if you were to look at it from a customer's perspective, it's the same situation. You have a software piece that you install on a server. You would probably need a person dedicated for

approximately two to three months to get the information into the system and presentable to the point where its useful. With Paglo, I can do that within four hours.

**Gardner:** Can you give me any metrics of success in terms of cost? It certainly sounds compelling?

### ***Lowest cost***

**Ruparel:** As far as cost is concerned, right now Paglo charges a \$1.00 a device. That is unheard of in the industry right now. The cheapest that I have gotten from other vendors, where you would install a big piece of hardware and the software that goes along with it, and the cost associated with that per device is approximately \$4-5, and not delivering a central source of information that is accessible from anywhere.

As far as cost, infrastructure cost wise, we save a ton of money. Manpower wise, the number of hours that I have to have engineers working on it, we save tons of time. Number three, after all of that, what I pay to Paglo is still a lot less than it would cost me.

**Gardner:** Chris Waters, tell me a bit about the future. It seems to me that this is a paradigm shift, if I could use sort of a cliché, in terms of cloud resources, and then using the network a bit more strategically. Now that you have taken this first step with Paglo, do you have any sense of where you expect to go next?

**Waters:** We're riding the wave of adoption of cloud by services, and we use that ourselves. The reason we're able to offer our service so cost effectively is that we leverage a very efficient data center. The Paglo back-end is designed specifically to support many, many tens of thousands of SaaS customers. So, they get to take advantage of the infrastructure that we have been building there, and we pass those cost savings on to them.

We all know that we're riding the benefits of Moore's Law as computational power becomes cheaper and network bandwidth costs less. Those things both allow us to do with Paglo more sophisticated analysis and capture more interesting data about the IT environment.

The most recent data source that we added to Paglo was the ability to capture information about your logs. I would say that the log management space is still barely scratching the surface of what's possible with logs. As companies move towards more Web-based services, there is an interesting characteristic. Web-based services generate more log data, when you contrast that with more traditional client-server based software. So the possibilities for analyzing that data and drawing conclusions from that data, and having it integrated with an overall perspective of the entire IT system is going to be a pretty cool part of Paglo's future.

**Gardner:** In the past, there were a number of inhibitors to where you could go with this. There was the storage cost. There was the access cost. There were simply network and bandwidth

issues, and then the ability to deal with that increasing load of data. Now it sounds as if you are pretty much free to start collecting everything.

**Waters:** Companies like YouTube taught us, and taught everybody, that if you for a second forget about bandwidth costs and you forget about storage costs, because they are rapidly hitting towards zero, and let your imagination run wild, you can do some really interesting things. Paglo takes advantage of those insights.

**Gardner:** For those folks who want to learn more about this, how does one get started? Is this a long process? I think Jignesh mentions only four hours, but tell us a little bit about the ramp-up process and where you might get some more information?

### ***Principle of transparency***

**Waters:** One of our fundamental operating principles here at Paglo is our principle of transparency. We want to make it extremely easy for people to find out information about Paglo, try it, and buy it.

You can go to [paglo.com](http://paglo.com) and read a lot more about how Paglo works and see a lot of screen shots of what the Paglo experience is like. You can sign up without a human ever being involved. So from sign up, to being able to search your own IT data is simply a matter of minutes.

**Gardner:** Very good. We've been learning quite a bit about the opportunity to do IT search and log search and management as a service. This gets to the heart of network management and analytics, and appears to be a value for MSPs, SMBs, and enterprises.

Here helping us discuss how we scale IT operations to the demands of the Web more smoothly and apparently at quite a bit of less cost, we have been joined by Dr. Chris Waters, co-founder and CTO of Paglo. Thanks for joining, Chris.

**Waters:** Thanks.

**Gardner:** We have also been joined by Jignesh Ruparel, system engineer at Infobond. Thanks so much, Jignesh.

**Ruparel:** Thank you Dana.

**Gardner:** This is Dana Gardner, principal analyst at Interarbor Solutions. You have been listening to a sponsored BriefingsDirect podcast. Thanks for listening, and come back next time.

Listen to the podcast. Download the podcast. Find it on [iTunes/iPod](#) and [Podcast.com](#). Download the transcript. Learn more. Sponsor: [Paglo](#).

*Transcript of a BriefingsDirect podcast on how log management and search work together to identify and fix problems with IT systems. Copyright Interarbor Solutions, LLC, 2005-2009. All rights reserved.*