



# QUALITY INGREDIENTS FOR SOFTWARE:

ACTIVEPERL, ACTIVEPYTHON AND ACTIVETCL

**ActiveState**

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## **ActivePerl, ActivePython and ActiveTcl**

A great dinner party host is only as good as the food served, and good food requires considerable prep time—not only in the kitchen, but also at the market—sourcing quality ingredients.

Good hosts never serve guests wilted lettuce, questionable seafood or expired milk. By the same token, sourcing the highest quality ingredients from reliable software vendors is equally important to organizations.

What if the same great results could be achieved with a pre-made meal from a trusted caterer? A meal that tastes homemade and results in sated, happy guests who are eager to come back for more. The outsourced food allows the host to do what she does best: entertain her guests.

It's a scenario that applies equally to businesses producing commercial products that rely on third-party components. Why spend precious time, resources and money to create something from scratch when you can purchase trusted third-party components instead? In car manufacturing, that may be relying on Bose for high quality speakers in the latest car—relying on Bose enables a car manufacturers' engineers to focus on what they know best—cars. In software, those components may be pre-built and proven dynamic scripting languages ActivePerl, ActivePython and ActiveTcl—the kind of quality ingredients enterprises want to include in their company recipe.

## **Pre-Built, Tested and Licensed Open Source Languages Get Great Reviews from Enterprises**

ActiveState's multi-platform dynamic languages are designed to help companies produce and distribute stable, reliable, high-quality products on time and

keep overall costs down by allowing developers to focus on their core competencies.

Recognized as the industry-standard distributions for Perl, Python and Tcl, ActiveState's enterprise-class language distributions are used by millions of developers around the globe. ActiveState's OEM licensing packages for ActivePerl, ActivePython and ActiveTcl enable companies to re-distribute the language with their own software. This enables companies to speed up time-to-market, focus developers on core competencies, create a seamless customer experience, and reduce legal risk with comprehensive licensing.

From development troubleshooting to emergency in-production coverage, ActiveState's enterprise support ensures priority access to open source language experts and includes unlimited incidents, guaranteed response times and quick fixes.

Through OEM licensing, ActiveState offers turn-key redistribution rights with indemnification, guaranteeing assurance to software and hardware vendors and their customers, removing the risks associated with copyright infringement lawsuits.

ActiveState's distributions are the recipe to your company's success. But don't just take our word for it. Read on to see how three companies leveraged ActiveState's offerings to raise the bar on quality, time to market, legal assurances, customer satisfaction and ultimately grow their markets.

# QUALITY INGREDIENTS FOR SOFTWARE



## EXECUTIVE SUMMARY

### The Challenge

- › Perl itself was not stable enough to meet CA's needs
- › Open source Perl had some multithreading and multiprocessor issues, as well as scalability problems
- › Needed to ensure that a solid, trusted version of Perl is used

### The Solution

- › Integrated ActivePerl from ActiveState into SiteMinder and other tools in CA's web access control product family

### The Result

- › Ability to find and address a regression in the core product within 24 hours of inadvertent defect insertion
- › Raise the bar on quality as well as cut the cost of expanding CA product matrix
- › Not only is it reliable, scalable and enterprise-ready, ActivePerl saves CA development time and dollars

*"ActiveState has both allowed us to continuously raise the bar on quality as well as cut the cost of expanding our product matrix."*

LAWRENCE BACKMAN, CA | Vice President

## THE CHALLENGE

CA is one of the largest independent software companies in the world. Seven years ago the company added CA

SiteMinder Web Access Manager to its roster, which has since become one of CA's most popular products.

CA SiteMinder Web Access Manager is an enterprise-scale Internet access control system. It provides more than 1400 customers with secure access to web applications and websites for employees, customers and business partners. With SiteMinder, CA's customers can rest easy knowing their applications and web resources are safeguarded and that all web access activities meet rigorous compliance standards and requirements. A majority of the Fortune 500 use CA SiteMinder in their businesses.

### Perl: Perfect for Automated Testing

In order to assure consistent quality across a broad product matrix, CA built a programmatic API for automated testing using the Perl open source language. Perl was a natural fit for the task because it's well suited to parsing and manipulating large amounts of data. It's also a familiar and simpler programming language for CA's customer base of system administrators, data base administrators and IT professionals than either Java or C++. Plus, Perl offers solid interoperability and expedites cross-platform development, a key requirement as SiteMinder runs on multiple platforms.

But, when CA investigated Perl, they weren't convinced the existing, free version was stable enough for their needs. Lawrence Backman is a Vice President at CA. He says at the time, open source Perl had some multithreading and multiprocessor issues as well as scalability problems.

*"CA SiteMinder is an enterprise level product so we had to be sure we were using a solid, trusted version of Perl," said Backman.*

# QUALITY INGREDIENTS FOR SOFTWARE



## THE SOLUTION

CA integrated ActivePerl from ActiveState into SiteMinder and other tools in CA's web access control product family.

### ActivePerl in Action

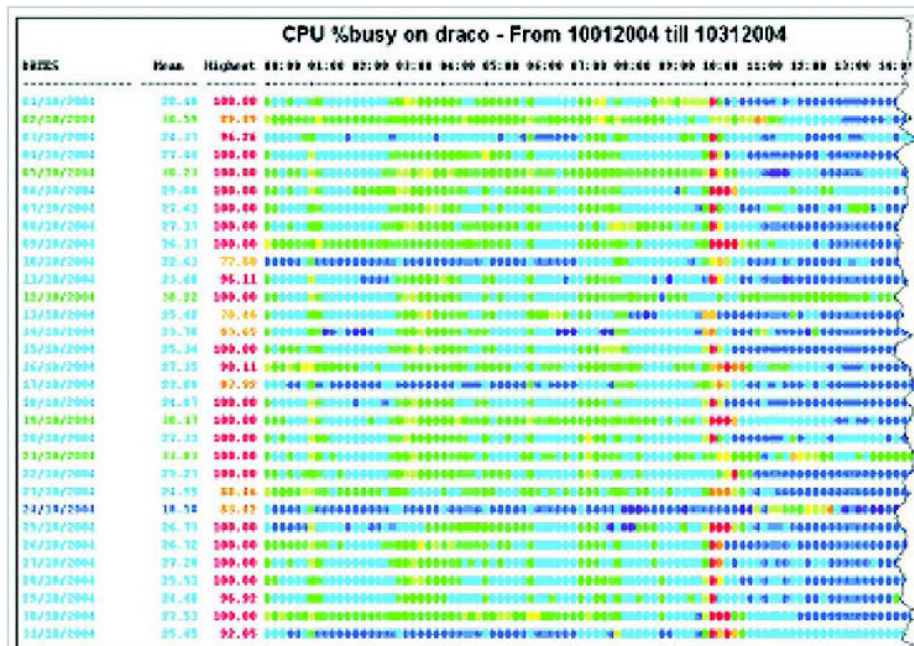
CA primarily uses ActivePerl to run test automations for the SiteMinder family of products. The product set spans a test matrix of more than 350 distinct platform combinations.

Because ActivePerl supports all these platform combinations, CA has been able to take Perl to 32/64 bit platforms of all the major operating systems without having to worry about OS or platform differences. These test automations are the first line of defense against inadvertent regression-instances where a feature stops working or performance slows. Here's how it works:

CA's QA test team created a series of Perl modules with more than 10,000 test cases. These test cases determine whether or not SiteMinder is functioning correctly and insures against inadvertent regressions across the full platform matrix. Every night, CA runs these test cases against ActivePerl for SiteMinder builds on 20 different platforms. The test cases decompose HTTP requests and responses going to and from a web server and verify that the SiteMinder access control components are providing the correct security operations.

In the screenshot of SiteMinder's test portal below, each cell in the grid represents a platform combination of the product. Automation tests run against each platform using ActiveState's ActivePerl.

These quality assurance tests are critical because they are CA's first line of defense when it comes to maintaining and improving product quality.



# QUALITY INGREDIENTS FOR SOFTWARE



## THE RESULT

“Using ActivePerl, we are typically able to find and address a regression in the core product within 24 hours of inadvertent defect insertion,” said Backman. CA does regular maintenance on SiteMinder, which may result in 25 or 30 fixes a month. It’s easy to unintentionally introduce regressions during a fix; automated testing ensures that doesn’t happen. If it does, CA fixes the problem immediately.

“ActiveState has both allowed us to continuously raise the bar on quality as well as cut the cost of expanding our product matrix,” said Backman.

### **ActivePerl Can Be Good For Business**

Although CA’s development team has the know-how and experience to work successfully with the Perl code available free from the Comprehensive Perl Archive Network (CPAN) website, Backman says using ActiveState’s enterprise-level Perl distribution and Perl Package Manager makes a lot more sense. Not only is it reliable, scalable and enterprise-ready, ActivePerl saves CA development time and dollars.

Maintaining, updating, reinstalling, configuring and porting Perl is not the best use of CA’s developers’ efforts. By leaving Perl infrastructure maintenance up to ActiveState, CA’s developers can focus squarely on enhancing SiteMinder and developing new features that drive the product’s marketability and revenue.

As for code quality, ActivePerl meets Backman’s and

CA’s high standards. He says the last seven years with ActiveState has been a smooth ride. Not only does ActivePerl deliver on platform independence— SiteMinder runs on more than 20 platforms--it’s grown steadily alongside SiteMinder’s increasing requirements. So much so, that CA has not had issues with ActivePerl’s robustness or scalability.

Technical support and expert Perl advice comes packaged with CA’s OEM version of ActivePerl. While CA made use of ActiveState’s tech support a bit at the beginning, Backman says they haven’t made a support call in the last three years.

*“It’s rare to say about third-party software... But over the years we really have had very few issues with ActiveState’s software,” he said. “ActivePerl is a core part of our product. It’s a key piece of our development cycle and is included in every version of SiteMinder we ship.”*

# QUALITY INGREDIENTS FOR SOFTWARE



## EXECUTIVE SUMMARY

### The Challenge

- › To enable users to customize their websites with a diverse array of optional Web apps, including content management systems, wikis, and image galleries built with Perl and Python
- › Ensure easy, issue-free Web application installation and management

### The Solution

- › ActivePerl and ActivePython distributions with OEM Licensing from ActiveState. With these out-of-the-box language distributions, Parallels can confidently go to market with the very best quality, correctly licensed versions of Perl and Python

### The Result

- › Easy customization options for small business users
- › High-quality source components, elegantly installed, providing a seamless customer experience
- › Access to a larger market worldwide for the Parallels Plesk Panel

## THE CHALLENGE

### Parallels Plesk Panel Makes Server Management a Snap

Parallels Plesk Panel is a complete web hosting automation solution that makes it easy for small businesses to create, customize, and manage websites through an intuitive user interface. Business customers use Parallels Plesk Panel to create a hassle-free point-and-click web presence and to manage company email accounts. Plesk Panel's offering for service providers makes managing server space and their own hosting customers easier. "Plesk Panel is designed for people who want to run Web servers but who are not necessarily experienced systems administrators," says Blake Tyra, Plesk Panel Product Manager.

### Parallels Partner Storefront Includes Perl and Python Powered Apps

Parallels Plesk Panel gives users the ability to integrate their websites with sites such as Twitter and Facebook. But Plesk Panel doesn't stop at these popular social services. In fact, Parallels offers customers an extensive selection of paid and open source apps through the Storefront included in Plesk Panel. Plesk Panel users can choose from over 100 applications to install onto their websites.

## THE SOLUTION

*"We have a large catalogue of applications available for our customers," says Tyra. "And there are a large number of open source Perl and Python-based apps, such as content management systems, CRM systems, wikis and image galleries, which we couldn't use without an interpreter. With one click you can install these systems onto a server. Having the ActivePerl and ActivePython interpreters from ActiveState running underneath definitely helps to facilitate us being able to offer this wide breadth of applications."*

*"We use their distribution because of the quality—they have tens of thousands of customers and this gives us reassurance."*

—BLAKE TYRA, PLESK PANEL  
PRODUCT MANAGER

# QUALITY INGREDIENTS FOR SOFTWARE



By packaging ActivePerl and ActivePython distributions with Plesk Panel, Parallels customers enjoy a seamless, out-of-the-box installation process when they install Perl and Python apps on Web servers. “If we didn’t include ActivePerl and ActivePython with our product, the customer would have to install Perl and Python themselves. That is counter to what we’re trying to do with this product, which is to make it as easy as possible to administer Web servers.”

## **ActivePerl and ActivePython Help to Ensure Quality Components**

Parallels Plesk customers shouldn’t have to worry about the possibility of third-party apps breaking, which is why Parallels offers only the very best components to users. “We want to use high-quality components such as ActivePerl and ActivePython to ensure that our customers have the best possible experience,” says Tyra. “Using these components also makes it easier on our internal QA process.”

ActiveState language distributions are quality tested and always use the latest code updates, so Parallels can be assured that packaging ActivePerl and ActivePython with Plesk will not cause problems for end users. “The reason we continue using ActiveState, as opposed to going with one of the many other open source distributions, is that ActiveState has been around a long time and has a consistently positive reputation,” says Tyra. “We use their distribution because of the quality—they have tens of thousands of customers and this gives us reassurance.”

Quality components and seamless installations make Parallels Plesk Panel a good choice for a broad market of small business customers who require simplicity and reliability. “It must be a simple tool,” says Tyra. “These are

often small businesses that may not have a dedicated IT person on staff. They expect things to just work at a point-and-click level. Using ActivePerl and ActivePython allows us to cater to this audience well.”

## THE RESULT

Simplicity is key for Parallels as a company, too. OEM licensing for ActivePerl and ActivePython makes the distribution of Parallels Plesk Panel hassle- and worry-free. OEM licensing from ActiveState is a turn-key, fail-safe re-distribution licensing, commercial support and indemnification offering for businesses that-- like Parallels--bundle ActivePerl and ActivePython with their products. That means Parallels can distribute Plesk Panel in full confidence knowing that ActivePerl and ActivePython open source licensing is in place, accurate, and will not result in legal issues. With ActiveState OEM distributions, there’s no need to waste time, effort and money managing open source licenses.

ActivePerl and ActivePython complete every Parallels shipment of the Plesk Platform. They contribute to hassle-free installation and customization, and ultimately, happy customers with more time to spend running their businesses.



# QUALITY INGREDIENTS FOR SOFTWARE



## EXECUTIVE SUMMARY

### The Challenge

- › Provide quickly customizable network monitoring solutions in broadcast communications, government and commercial systems
- › Ensure stability and 24/7 uptime for critical monitoring systems
- › Be able to customize each installation to meet specific customer requirements

### THE SOLUTION

- › ActiveTcl from ActiveState, for customizable components of MaxView system

### THE RESULT

- › Faster development time thanks to ActiveTcl OEM licensing
- › Stable system and support from ActiveState
- › Easy, automatic customization

*“ActiveState’s reputation and support of dynamic scripting languages is unparalleled. ActiveTcl is the best supported distribution of Tcl that I know of.”*

—BRIAN BRADY, SOFTWARE ENGINEER, ROCKWELL COLLINS

## THE CHALLENGE

### Stability, Uptime and Flexibility are Paramount for MaxView

Rockwell Collins’ communication and aviation electronic solutions are in use on all seven continents. Their MaxView Network Management System provides remote control and automation monitoring control for satellite and broadcast communications, as well as government and commercial systems. Using MaxView, network operators can see and manage an entire communications network in a single view without having to interpret dashboards from multiple proprietary systems. Users can control their network using MaxView, and can automate complex tasks and receive advanced reports. Using one system instead of many means less complexity and training, as well as lower support costs. MaxView also enables scheduled changes without human involvement. If a device fails, MaxView will automatically switch over to a backup, notify users, send e-mails, or make phone calls. For Rockwell Collins, the development challenge with MaxView is twofold: providing highly customizable solutions for a widely divergent customer base, and ensuring uptime in sectors where downtime is simply not an option.

## THE SOLUTION

### Easy Customization with ActiveTcl

The MaxView modular product suite can be customized for specific customer user interface requirements, and customization is a key sales feature. As such, Rockwell Collins needed a technology solution that would make it fast and easy to customize MaxView according to distinct customer interface requirements. Enter ActiveTcl. Tcl (Tool Command Language) is a powerful dynamic programming language used frequently for networking,



# QUALITY INGREDIENTS FOR SOFTWARE



administration and testing, and is ideal for cross-platform development. Rockwell Collins relies on ActiveState's ActiveTcl language distribution because it is a complete, ready-to-install commercial grade distribution that works cross-platform with Windows, Linux and Mac OS X plus Solaris, AIX and HP-UX.

## THE RESULT

Since 2005, ActiveTcl has been Rockwell Collins' choice for powering device drivers—the code that connects MaxView to a specific device or system on the customer end. By using ActiveTcl in device drivers, Rockwell Collins doesn't have to manually change its core product to work with every unique customer interface. "We have a Tcl interpreter built into our product so we don't have to change the core product to adapt to different interfaces," says Brian Brady, a senior software engineer at Rockwell Collins. ActiveTcl also powers automation logic, which can be customized by end users onsite once the system is operational. "Customers can change these smaller bits of code that, thanks to ActiveTcl, don't have to be compiled. Nor do they affect the quality and stability of the core product."

Another key benefit of ActiveTcl is that it gives Rockwell Collins the ability to make development changes on the fly at customer locations. "We can be away from our development environment and we don't have to worry about compiling code and distributing it for particular platforms because ActiveTcl supports so many platforms. It's the cross-platform aspect of ActiveTcl that's so valuable to us."

### **ActiveTcl is Worry-free Tcl for Critical Systems**

Uptime is critical in the broadcast industry, where satellite time is incredibly expensive. "We have service agreements where seconds of downtime are worth millions

of dollars, so it's critical everything stays up," Brady says. "And in the government and military space, it's even more important than that."

Rockwell Collins knows it can count on ActiveTcl's stability and ActiveState's solid reputation when it comes to ensuring uptime. "ActiveState's reputation and support of dynamic scripting languages is unparalleled. ActiveTcl is the best-supported distribution of Tcl that I know of," Brady says.

### **Development Speed Keeps MaxView Out Front of Competitors**

While the stability and technical value of ActiveTcl are critical, ActiveTcl also introduces business benefits, such as speeding up development time. "ActiveTcl helps us deliver solutions faster than our competitors. And we can react to changing requirements," Brady says. For instance, when responding to a proposal or a set of requirements from a customer, Rockwell Collins doesn't have to waste time going through a full software development cycle or creating a new product from scratch for each implementation. "We have a core product that we're reusing, that we already know is set and stable, and then we only change the ActiveTcl part of it for each implementation. We've separated out the customizable parts of it from the core code. And when we write code in ActiveTcl, we don't have to compile it to use it. We can run it right then and troubleshoot problems very quickly."

For Rockwell Collins, it's all about the rapid development and ease of customization. "There's a quick learning curve. Our customers have learned to go in and start doing customization work themselves." Ultimately, ActiveTcl ensures MaxView is faster to develop, easy to customize, and stable. And with those bases

# QUALITY INGREDIENTS FOR SOFTWARE



covered, Rockwell Collins can provide a high quality product that consistently meets its customers' needs. To enable these capabilities and embed ActiveTcl in

MaxView, Rockwell Collins uses OEM licensing from ActiveState, allowing them to take their product to market faster with the right licenses in place.

## WHY USE ACTIVESTATE DISTRIBUTIONS?

ActivePerl, ActivePython and ActiveTcl are industry-standard dynamic language distributions from ActiveState. These proven distributions are recognized as the best available and are used by millions of developers around the world. ActivePerl, ActivePython and ActiveTcl Community Edition are easy to install and work cross-platform on Windows, Linux and Mac OS X, while Business and Enterprise Editions expands the usage to Solaris, AIX and HP-UX. Typical results include shortened development cycles, increased efficiency and faster time to market. OEM licensing is available for any of the Editions.

ActiveState understands that businesses with commercial implementations of open source languages require stable code, technical support and indemnification. Their commercial-grade open source language distributions have become renowned for quality and are now the de-facto standards for millions of developers around the world. Additionally, ActiveState's support promises priority access to language experts, which guarantees you won't be left high and dry when you need help the most. Support options include unlimited incidents, fast response times, and fixes quickly delivered to you electronically so your IT team can focus on its core competencies and lean on dedicated language experts for design and development advice for Perl, Python and Tcl requirements



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## ABOUT ACTIVESTATE

ActiveState believes that enterprises gain a competitive advantage when they are able to quickly create, deploy and efficiently manage software solutions that immediately create business value, but they face many challenges that prevent them from doing so. The company is uniquely positioned to help address these challenges through our experience with enterprises, people and technology. ActiveState is proven for the enterprise: more than two million developers and 97 percent of Fortune 1000 companies use ActiveState's end-to-end solutions to develop, distribute, and manage their software applications written in Java, Perl, Python, Node.js, PHP, Tcl and other dynamic languages. Global customers like Cisco, CA, HP, Bank of America, Siemens and Lockheed Martin trust ActiveState to save time, save money, minimize risk, ensure compliance and reduce time to market.