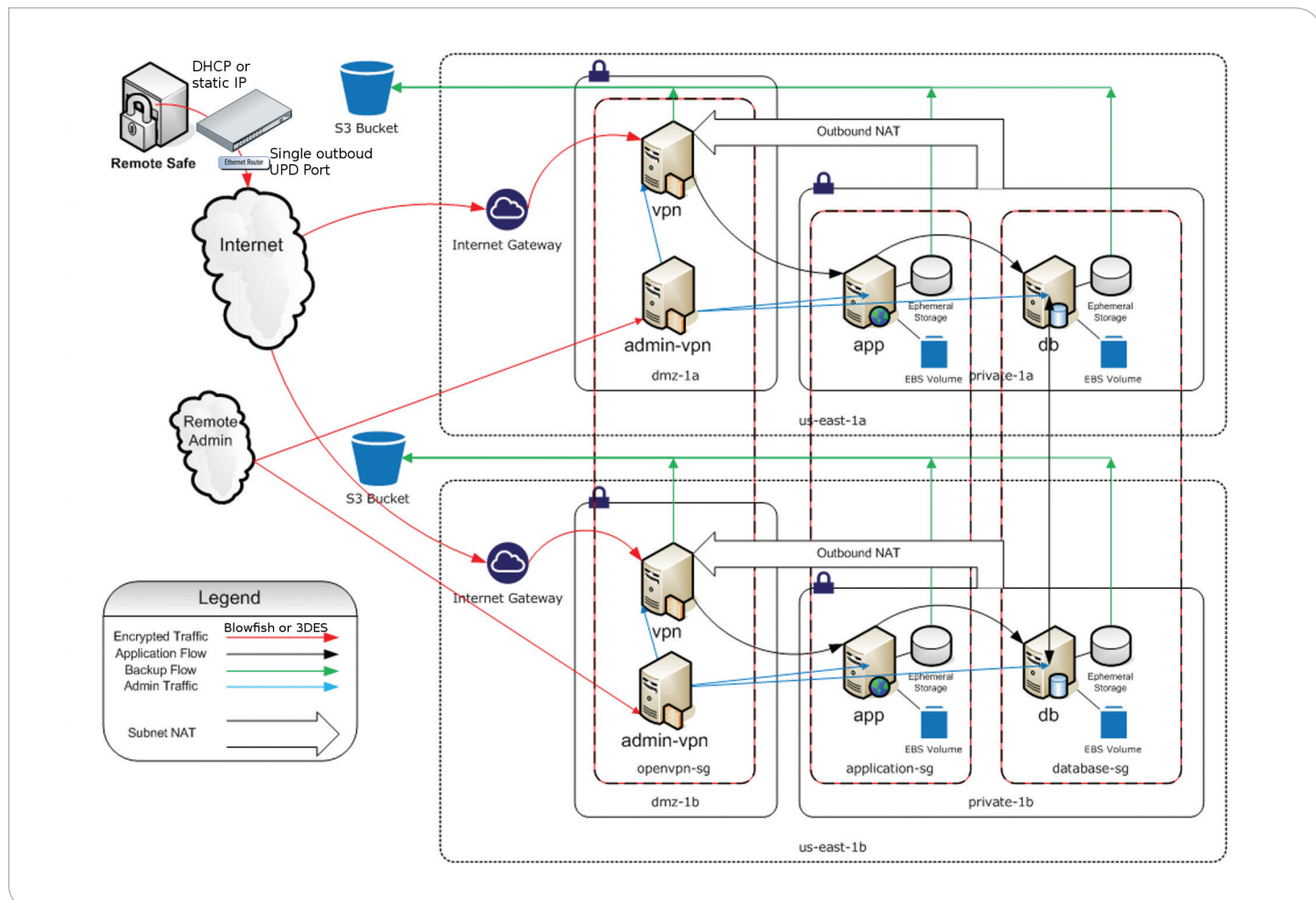# Software and Security Technologies

Overview

ALL PRODUCTS IN THE SUMMIT SERIES ARE PART OF A CLOUD COMPUTING SOLUTION. EACH PRODUCT IN THE FIELD IS TOTALLY PLUG AND PLAY.

No software is loaded in the field, no system configuration is done, and no networking configuration is required. Just plug the power in the wall and the network cable in the back and the system will start up and run.

Summit web services run redundant, replicated servers to handle all the back end, data storage, management, configuration, and reporting functions. This is done using industry standard XML messaging which can be easily interfaced to most other systems whether they be Java® or .NET based.

An important part of cloud computing is security. Our security between the safes and the cloud servers is the best available. The only access to the safes is through a state-of-the-art encrypted VPN channel. Encrypted certificate based authentication is used to establish the connections between the safes and the cloud.

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Solid State Computing Platform

Key to any electronic product's reliability profile is the platform upon which it is built. All Summit Series products are built using a proven solid state architecture. A true computing appliance (e.g. Kiosk, Router, DVR, or Smart TV) all share the same hardware profile: a diskless and fanless computer with a read-only operating system. This removes the most common sources of failures in the field: disk drive failure and corruption of the operating system caused by sudden power on/off events.

Linux-Based Open Source Operating System

Summit's embedded operating system is built on a robust and reliable version of Linux. Linux is known as the leading platform for security and immunity to attacks from the outside world. On top of Linux, we create and load our own proprietary enhancements. The operating system is configured and runs in ultra-secure mode with its own embedded firewall that blocks all external inbound access to the safe. The safe communicates through a single outbound encrypted VPN tunnel to the server cloud. The system is virtually immune to viruses, worms, and other common attacks that occur to computers on the Internet.

A key component in the solution is our in-house developed, proprietary device driver support for all the peripheral devices in the safe product line. This includes drivers for touch screen devices, printers, i-button, locks, relay boards, cash validators, cash recyclers, coin counters, and coin dispensers.

An open source database, MySQL, is used both on the safes and the cloud servers for data management, storage, and reporting. MySQL is widely recognized in the industry as rivaling the most expensive commercial databases for speed and reliability and in many cases out performs them.

In addition, we have the advantage of having access to the complete source code for any piece of software starting from when the computer leaves the boot prom until the last pixel is painted on the screen. We rely on no third parties to find, fix, or release patches for their software.

Common Application Development Platform Based on Java® System

A very unique feature to Summit Series of products is they all operate from a single code base. Each application is created using our point and click based rapid application development tool. No custom programming is created for any individual application. This is important as it allows us to focus on enhancing and maintaining a single deployment engine and not specific code written for specific applications or specific customers. With this approach we are able to develop, test, and deploy applications in terms of weeks instead of years. It also means we are able to make modifications and changes to meet evolving customer needs quickly and efficiently. Lastly, since no custom code is being developed, we are able to easily and cost effectively support and maintain all deployed solutions.

The programming of our common code base is in Java®. Java® is known for providing a robust and reliable deployment platform that frees the application from the problems, such as pointer errors and memory leaks, that always occur with other programming languages. Applications developed in these other environments often take years to debug and are in reality never truly bug free. With Java®, we can deploy our application knowing that it is capable of running for years at a time without reboot or reset and will never cause a system freeze.

DrillLess Lock™ Technology

It is inevitable that some electronic safes will eventually fail in the field. This can be due to either a power supply failure, hardware electronic failure, or, for our competitors, disk or operating system corruption. Traditionally, the only way to deal with this issue is to send someone to the site to drill the safe open and then repair, secure, and get the safe back on line. With our patent pending DrillLess Lock™ Technology any service device with a USB interface and loaded with our Secure IP™ application can be used to unlock a failed safe. All locks in the safe can be both controlled and powered by the USB interface. In order to actually unlock the lock, the service device runs our Secure IP™ application which reads a challenge code from the device. This challenge code is then sent to our Global Security Operations Center and only after extensive verification of the requestor, location, and circumstances, is a response code issued to enable the requestor to properly unlock the safe.

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