



OVER THE YEARS, WE'VE ALWAYS TAKEN CARE OF BUSINESS WITH AN OPEN DOOR POLICY

Crimson Times

Second Edition

December 2013

IN THIS ISSUE

Crimson Times Newsletter

by Angelo Kalpakis (akalpakis@crimsontt.com)

The printing presses have been busy these past few weeks in finalizing the second edition of our newsletter. Many thanks go to the contributors for the articles to make this happen. Special thanks goes to Mike De Winter for putting this together and taking ownership of this edition.

In this edition we examine some day-to-day operations that many feel are being taken care of but how safe do you feel your backups are when called upon to recover from a disaster. One incident Crimson had a few months back resulted in a customer database being corrupted resulting in transaction not posting properly. In a perfect scenario, restore the last backup, reapply the transactions from the day and you're all caught up. Well, this is not a perfect world. Backups for the last 10 days were also corrupted. Luckily, the backup from 11 days ago was good. For most systems this could result in unrecoverable data and transactions. How many transactions did Scoria loose? NONE. We recovered 100% of corrupted transactions. How did we manage to do this? Telling you would expose our secrets and then the competition would try to duplicate our formula. Let's just say three tiered duplication played a big part in this recovery.

Also, Crimson TT has been attending the NRF show for a number of years. Since the economic downturn back in 2007, we felt our marketing dollars would have been better spent on new hires than on showcasing our product at a show with very low attendance numbers. But since then, the

markets have rebounded and attendance is up, so Crimson has decided to buy back into the NRF show. See our invite later in this newsletter.

So many things make sense from a cloud perspective and the innovations we are proposing for the new system are truly mind blowing. I have been in the retail industry for a number of years and was one of the main architects of our Scoria™ Retail Suite. We have learned a lot over the years and always feel we can do a better job and reach more customers through innovative design. I believe with this cloud direction we are truly breaking incredible ground in design, architecture, functionality and flexibility. We will still maintain a lean-and-mean approach when it comes to application size, but the rapid development and ease of support will be greatly enhanced. More details to following within this newsletter and subsequent newsletters.

"Selling a Point-of-Sale system to a retailer is easy. Trusting the people you will be doing business with for the next 10 years or more is a challenging art form."

Hoping to see everyone at NRF 2014.

P.S. If, after reading this newsletter edition, you feel either you can contribute to its content or would like to see a topic covered in a future publication, please feel free to let us know.

NRF Show - 2014

The National Retail Federation show in New York IS a big deal. Come and meet the people behind your Point-of-Sale solutions.

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Backups

Backups are a large part of a company's infrastructure to ensure a smooth and safe operation. How important are backups for you?

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Dynamic Hierarchical Mechanism

This isn't a geek term for confusing our customers. It's an innovative way to maximize configuration without the complications of unique business rules.

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What makes Crimson TT Different from the Competition?

From day one, Crimson TT has stuck with some simple rules and guidelines that allow us to run more efficiently than larger corporations. Here are some of our secrets.

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'Tis the season . . .

Many people think that this is a relaxing time for staff at Crimson. Well, it's not. This time of year allows us to finish off a number of tasks because customers are focusing on selling instead of innovating. The innovations occurred within the last 11 months.

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A Special Invitation from Crimson Transaction Technologies

by Gerry Metzger (GMetzger@crimsontt.com)

The team at Crimson TT would like to invite all our Retail friends and partners to come and join us at the Retail Industry's biggest trade show of the year.

The NRF, National Retail Federation will host this grand event on January 13 and 14, 2014, at the Jacob K. Javits Convention Center in New York City.

A tour of the Exhibition floor is almost the equivalent of a PhD in Retail Technology.

Our booth is located on the main floor, extreme right, Booth number 4443.

Aside from meeting up with Angelo, Dave and Gerry, Crimson will be showcasing our latest Scoria POS Store System, configured for General Retail.

Our Advanced Payment Technology will be demonstrated on the latest equipment.

You will see these solutions in both fixed and mobile formats.

It is best to pre-register at: <http://bigshow14.nrf.com/>

As a retailer, you can enter the exhibition hall free. Simply contact Gerry at GMetzger@crimsontt.com and we will set you up with the free entrance pass.

Just tell them you are coming to see the best the industry has to offer, which happens to be, in booth 4443.



Backups

by Mike De Winter (mdewinter@crimsontt.com)



Everyone likes a computer that just runs and lets us get on with what we want to do. When something goes wrong, the results are anywhere from waiting a little longer for what we want, to possibly having the computer and its data unusable for hours, days, or forever! Not the surprise anyone wants. We can protect ourselves against some of the consequences of a failing computer by having proper and recent backups of our important data.

Many things can go wrong with your PC: theft, malware, user error, operating system or software crash, memory error, hard drive failure, disasters like power failure, fire, flood, storm or earthquake.

What would be lost temporarily? And what would be lost permanently? Do you have backups that would survive the problem that caused the initial data loss?

Let's look at the reasons for the data loss:

If your laptop is left behind at an airport, in a taxi, or your house or office is broken into and your computer is taken, someone else has your information and you don't. Few recoveries are made in these situations, and your data is gone!

Some malware infects the documents on your computer with malware, while others destroy your documents. CryptoLocker is malware that infects your computer and encrypts the documents and other user-created content on your computer and on network shares that your user has access to. There are only two ways to recover these

files: from backup, or pay the criminals hundreds of dollars to decrypt the files.

Through user error, the wrong document can be edited or deleted. Operating system and software crashes may cause documents to be left in a corrupted state. Memory errors can cause corrupted information to be written to the hard drive, or cause the computer to crash. Power failures can cause the same issues as operating system and software crashes, and can also cause the hard drive to continue to write information to the hard drive while failing to keep the write heads positioned correctly over the disk's surfaces causing data corruption.

Larger scale disasters like fires, floods, storms and earthquakes can destroy the computer and any backups stored nearby. Earthquakes may damage the computer's case, but not the hard drive. Fire, on the other hand, can damage the fine electronics, read/write heads and positioning controls, as well as damaging the disk platters themselves. Some of this damage is irreversible, some is just expensive.

Many people have a 3-2-1 rule for Backups:

3 – Number of copies of the data. If you copy the originals from your PC to another hard drive for backup, then delete the original, you still only have one copy!

2 – Number of different media types used in your backup strategy. If you have backups on hard drives only, an electro-magnetic pulse could destroy all your backups at once! However, if you have optical media such as DVD or BD (Blueray Disk,) then you have a better chance of one of your copies surviving!

1 – Number of copies that are offsite, in a different geographic location. In the case of fire, flood, storm and earthquake, at least one copy needs to be elsewhere so it can survive. The room next door might be good enough for protection against hackers, but if a fire or flood takes your originals, the backup might be gone as well.

Dynamic Hierarchical Mechanism

by Mike De Winter (mdewinter@crimsontt.com)

Power and Flexibility

In developing our new Cloud offering, we are designing more dynamic hierarchical mechanism that will be used for product Classes, Business Structures, and more, for improved flexibility and power.

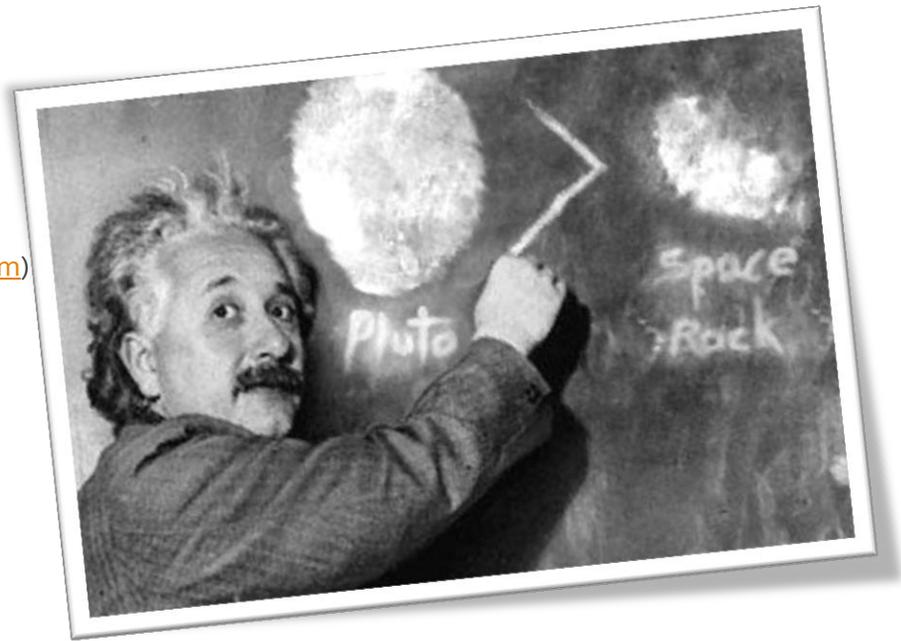
In soft goods there are many categories by which products are classed: style, color, size, etc. Often, these categories or Classes have fixed relationships or hierarchies, though some of these Classes can be optional and some can be added.

We are implementing our Class system using the dynamic hierarchical mechanism which will allow any hierarchy and naming convention desired. You might have a Class called Size that is mandatory, though you might have a Class called Style which is optional. You might not have Classes called Size or Style, but might have Color and Shape. Maybe you have linens with thread counts, so having a Class called Thread Count might be important.

Some of these Classes might be optional for some types of products but not others: Linens might have a Thread Count and Size, but window treatments like curtains or shears have Length and Width dimensions.

What you call your Classes and how they relate to each other will be customizable by the end user, not requiring costly and time-consuming software modifications.

This same Class mechanism will be used for defining your Business



structure: Do you have Regions? Do you divide your territories by States or Time Zones? Are there other arbitrary divisions in use? Multiple levels can be defined and arranged to suit your needs, from Head Office down to Departments within each Location, with as many levels as required.

The Business structure you define will affect many aspects of the system, including reports, merchandise transfers, and more.

Do you need to be a rocket scientist to understand how to develop something like this? It would help but not a requirement at Crimson TT.

Do you need to be a genius to setup and configure this to function as required within your organization? Not if we can help it. This process will be rampant within our new cloud based product so once it is setup and configured at the first level, it can be implemented at all levels. You will wonder how you lived without it.

We will continue to write about innovations we are working on throughout the development cycle. If you have questions as to how this

will work for you or want to understand in more detail, please let us know and we will do our best to educate.

What makes Crimson Different from the Competition?

by Gerry Metzger, Sales and Marketing Manager (GMetzger@crimsontt.com)

Much of our marketing effort at Crimson is devoted to the brand and what makes us different from our competitors. There are differences in our products and there are differences in our company and how we satisfy our customers. There are many companies in our industry that do what we do. It is a competitive field. However, none of our competitors offer a solution the way we do.

Most of our customers, (who, after all, are the real judges of our value) appreciate the following differentiators;

- 1 Crimson is the author and owner of the application. Unlike some dealers and resellers of software, Crimson has the application experts in house. Any issues with the software are dealt with expeditiously by the staff that wrote the code. This is one of the reasons the system is very robust, yet flexible. There is no communication problem between the user and developer.
- 2 Store Systems, POS, Fee Collection and Payment systems is ALL we do. We are specialists in this field and follow industry trends and requirements before they become the norm or regulations. Since we only do this, we are not distracted by selling or supporting other products or services.
- 3 Crimson can provide a total solution to a client by cherry picking best-in-class partners for a complete system. Our experience has shown us which partners are dependable and value driven. These partners provide us the hardware, the hardware support, the hosted services and the leasing. We take responsibility for all.
- 4 Our FeePos or POS system and Credit Switch are an integral part of the product and not a 3rd party application. There is no additional cost, up front, or thereafter, for the Credit switch. This Switch, by itself, is often sold to our competitors who will subsequently augment their own POS product.
- 5 Our knowledge of the payment industry has allowed us to propose a card processing system beyond PCI compliance. PCI compliance does not guard against a breach. Most breached merchants have been compliant. An advanced P2PE (Point-To-Point Encryption) solution will offer this type of protection. The sensitive customer information is encrypted at the pin pad and only de-encrypted behind the payment processors firewall. This means

that the data is never seen by the POS system and this removes the vast majority of the POS systems from PCI scope, dramatically reducing the expense and time required for PCI audits. Expensive and time consuming PCI audits will no longer be necessary.

- 6 We give our customers maximum freedom and flexibility to pick the card processor of their choice. Our Credit Switch is certified with almost all major processors. There would be no effort or cost associated with a decision to switch to one of these processors that may offer a lower transaction fee. We usually suggest the latest Pin Pad technology to assure this solution is transferable.
- 7 Our Scoria Retail Suite, is completely Parameter Driven. This unique design feature has 3 significant benefits for our customers;
 - a) The initial setup can virtually customize the application without changing a single line of code. Setting tables, files and parameters dictated by your business rules, make this uniquely the customers' application.
 - b) All our customers have exactly the

same basic system installed; only the parameters are different. Whereby most competitors have modified their application for different customer, we have accomplished the same goal with parameters outside the code. This simplifies our support of the product and allows us to keep developing leading edge features to the most recent version, which all customers can adopt, if they like.

- c) As our customers' business changes or grows in complexity, they, with or without our help, can change the parameters with little effort or cost. Of course, one can test these changes in a lab before they are deployed.
- 8 We take sole responsibility for the installation, running and ongoing support of our system. This direct approach is the most effective way to assure end to end success.

Several of these 8 differentiating factors have been mentioned by our customers as the main reason for choosing a solution from Crimson. Which one would be the most important one for you?



'Tis the season . . .

by Vic Mehta (info@crimsontt.com)

Another calendar year draws to a close, a sentinel wagging its finger in stern reminder to take stock of what has transpired, and to prepare for what is to come and, above all, to re-evaluate the strength of current resources.

With the holiday season upon us, many of us are relaxing a little from the rigours of our business world in favour of remembering eventful episodes from the past year to share with friends and family at the merry times planned for the coming days.

However, I have no such luxury. I have to take stock of the challenges of the past year that allowed us to research or develop and incorporate innovative solutions, such as point to point encryption for payment processing systems that dramatically reduces PCI audit footprint and increases data security.

I also have to continue preparing for our cloud based product offering to accommodate the trend towards elastic

computing resources that expand and contract according to your needs at the time rather than tying up capital in under-utilized capacity or under-performing infrastructure.

This is also an opportune time to restructure the database architecture to support hierarchical reporting and data visualization dashboards. Business Intelligence on operational systems is completely different from (what I tease my peers in the field with) "legacy" data warehouse based Business Intelligence. Operational systems based Business Intelligence is near real-time. This means you can react to events as they unfold, like checking on too many voids within a given timeframe at a particular register. You can also use it to plan or react to changing staffing requirements based on sales volumes, stocking levels and product shipments and transfer schedule changes. All the key indicators required to provide excellence in customer service while optimizing cost become achievable, on mobile devices too.

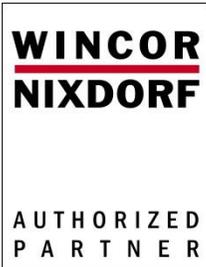
Of course, having all this accessible from anywhere with an internet connection and a web browser brings security to the forefront. The security concerns of a cloud based environment are only slightly different from the security concerns of on-premises system. The number of potential unauthorised eyes increases exponentially with a cloud based system. However the need to control access to only authorized eyes remains the same. This control is maintained using two concepts. The first is 'authentication'. This element verifies the request to access particular information came from who the requester identified herself or himself as. The second is 'authorization'. This element verifies that the identified requester is permitted to access the particular information. Modern authentication and authorization methods allow an organization to provide these services from their own internal servers to applications running in the cloud environment. This allows organizations to provide or revoke access immediately instead of having to go through a process of requesting the change to a third party and hoping the request is processed in a timely manner.

Data sensitivity trumps everything and fortunately there are a host (no pun intended) of options readily available to address that as well. Database servers can be remotely hosted in a shared or private configuration or hosted on-premises. There are a number of other technical items to consider, such as, backup scheduling, off-site backup rotation considerations and database performance tuning.

So, 'tis the season to reflect on the cloud, be mobile aware and secure, guided by Business Intelligence and predictive analytics. 'Tis also the season for all of us at Crimson to wish you a safe and joyful holiday season filled with the warmth of family and friends.



We'd like to thank our sponsors and supporters over the years...



Operating at a global level, Wincor Nixdorf assists retail banks and retailers by supplying successful IT solutions designed to optimize their processes at the interface with customers. This is all the more important when one considers that both industries are exposed to intense competition, forcing them to improve their business processes continuously.

Wincor Nixdorf is a leading supplier of IT solutions and services centered around the branch and store operations of banks and retailers.

We develop technologies tailored to our customers' consumer-facing operations. In doing so, we are able to capture the essence of market trends in new methods of interaction while also pursuing process excellence.

We are fully committed to exceeding the expectations of our national and international customers through innovative solutions and highly competitive deployment processes.



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