

# GlobalCollect finds recipe for success in Ingres and HVR



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**Eric Couwenberg**  
CTO, GlobalCollect

International payment services provider GlobalCollect is one of those few companies for which the phrase mission critical really does have currency. Dependable IT systems that perform faultlessly 24x7 are not just important to its business, they're absolutely critical. Just ask the customers and vendors who last year depended on GlobalCollect to make more than 40 million payments and conduct in excess of 80 million transactions collectively worth over \$1.5 billion.

A solid record of reliability and success has helped GlobalCollect achieve year-on-year growth and become a leader in electronic payment processing. Its clients include big names like KLM, Skype, Vodafone, Nike, FT, Reuters, Sony and Apple iTunes. It is by using GlobalCollect's services that these companies can offer their telephone, Internet and mail order customers a slick and efficient way of making customer-not-present purchases of goods ranging from tunes and tickets through to software and computers.

Given the emphasis on systems availability, it's not surprising that when GlobalCollect itself goes shopping for IT, it does so with very serious intent indeed. The list reads like a roll call of the industry's best of breed suppliers: Computers - Sun, HP. Networks - Cisco, Nortel. Operating systems: Unix, Linux, Windows. And forming the all-important back office is the Business Open Source database Ingres along with the companion database replication tool High Volume Replicator (HVR) from Dutch software company PSB.

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"Everything we do relies on those Ingres back office systems. Fully 70% of all the work here goes on in the back office," explains GlobalCollect Chief Technology Officer Eric Couwenberg.

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It is testament to the dependability and scalability of Ingres that having been first deployed at GlobalCollect on day one in 1994, it is still - albeit in latest 2006 version - continuing to deliver around the clock. And with a customer base across some 200 countries in all time zones of the world who expect to be transacting business 24 hours a day, around the clock means exactly that. Downtime is not in the vocabulary at GlobalCollect's

headquarters in Hoofddorp near Amsterdam, Netherlands.

"That's why we have so much redundancy built into our systems," says Couwenberg. "We have many fall-back systems and much redundant infrastructure. For example, there are Web servers standing by that can do many jobs, reconnecting automatically as needed."

## Unique service

Another factor in GlobalCollect's success is the uniquely broad service it offers to its clients. While most payment service providers go no further than offering a technical link to payment acquirers, GlobalCollect does much more. Its complete offering includes contractual and technical connections to payment processors worldwide, bank account network management, matching, reporting and - in the last stage - funds remittance.

It's a transparent, end-to-end service that lets vendors concentrate on selling without worries about getting paid. In turn, customers can choose from the largest range of local currencies, choosing the method of payment from the widest range of options available ranging from debit and credit cards, direct debits, bank transfers, innovative real-time bank transfers and e-Wallets like PayPal to cash over the counter, prepayment schemes, cheques and invoices.

“The experience with Ingres support has always been good. Not that we have to use it much, but when we do they always give good service. Now with Linux, we're moving to open source in a broader sense.”

Underpinning all this are no less than 14 Ingres back end databases, the largest of which contain from six to nine million records each. It is here that PSB's High Volume Replicator also plays a key role in moving data from the core database out

**Industry**  
Payment Services Provision  
**Annual Revenue**  
€36.9 million  
**Employees**  
70  
**Product**  
Ingres 2006

  
globalcollect™

**HVR**  
HIGH VOLUME REPLICATOR

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to all the remaining systems. PSB (www.hvr.biz) is a long-standing Ingres partner and supplies its High Volume Replicator solution to customers globally.

After looking at competing replication tools, it soon became clear to Couwenberg and his colleagues that HVR was the only one that offered the speed, flexibility and sheer volume performance that GlobalCollect needed.

"To begin with, our replication needs were relatively modest, starting with just two channels moving data - central system to archive and vice versa - but today we're at 25 to 30 different channels across 14 databases, and that's growing all the time as new applications come on line," he says.

"That's beyond a lot of replicators on the market, but PSB's HVR handles it all very well, as well as giving us the degree of flexibility we need."

While replication technology is most often thought of in terms of archiving or backup, it is also a powerful way of applying new data to multiple systems in the least amount of time. One example is the way GlobalCollect works with international exchange rates.

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Close and timely tracking of more than 200 different countries' currencies is essential to the international nature of its payment processing business. But keeping the information up to date and in synchronisation across all the company's systems is equally important. This is

where HVR comes into its own. "We read in new rates every day into the central system then, once they're authorised, they get replicated to the other systems with HVR. It's quick and it's efficient," says Couwenberg.

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HVR also saw use as a vital migration aid when GlobalCollect moved to a newer version of its core database. By starting a replication channel then buffering the data, the IT team was able to capture everything in HVR for the duration of the switchover, then simply resume the channel to get the information into the new database.

## Flexibility

It is this kind of flexibility that has seen HVR adopted by a wider business community and by users of databases other than Ingres. Customers include Lufthansa and Atos Origin along with numerous telecommunications companies and other concerns, some using Ingres with others using Oracle and SQL Server.

But the performance and abilities of both HVR and Ingres did not come as a surprise to Couwenberg. Far from it. His experience with Ingres goes back as far as 1987 and he was well aware of HVR's pedigree too, the product having been developed by PSB following a request from international mail, express and logistics company TNT.

It was TNT that created GlobalCollect in 1994 in a move to add value to its distribution services, with GlobalCollect ultimately becoming a separate company in 2005. In 1994, TNT was already a big long-term user of Ingres so it was a natural step to adopt the known and trusted database for its then new payment services business. It was the same thinking that led GlobalCollect to adopt the Uniface rapid application development environment and the C programming language.

The validity of these early choices is just as strong today as it was then. A new payout system - involving a C component communicating directly with the central database - has just gone live without incident at GlobalCollect. Development is also now under way of a reporting system that will eventually see GlobalCollect's merchant clients being able to build their own reports online then download them securely to their own systems.

And in a move that perhaps owes more than a little to the Business Open Source philosophy that underpins Ingres, Couwenberg and his colleagues are now beginning a switch of operating system from proprietary Unix to open source Linux.

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"We've found that the user community is working very well and it's fast. There are no concerns about the organisation going open source."

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