



# Uptime in Real Time

## Proactive ATM Service and Availability



An automated teller machine (ATM) is a financial services organization's face to the world. ATMs represent a powerful way to serve existing customers, reach out to new ones and create multiple revenue streams. Today, ATMs are many things—but they are nothing unless they are up and running. That's why high availability is the ATM's single most critical operating feature.

Enter NCR Corporation, the global technology company known for building ATMs that help financial institutions create a stronger competitive position in an increasingly competitive market. NCR has once again changed the playing field by offering High Availability Services, the industry's first predictive and proactive approach to ATM channel uptime and servicing. NCR's High Availability Services incorporate rules-based logic in a single or multi-vendor environment, regardless of whether the ATM is running on OS/2, NDC or the Windows platform.



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**Brad Luckhaupt**  
director of Global Services Marketing  
NCR Financial Solutions Division

### Reducing the Extreme Cost of Downtime

With this solution, financial services organizations are able to proactively monitor their ATM networks, collect accurate status information, resolve problems remotely and reduce preventable downtime.

“We see the ATM as an extension of our tellers so uptime is critically important to our brand,” said Wade Edwards, vice president of the ATM Channel at Commerce Bank, headquartered in Cherry Hill, New Jersey. “NCR’s High Availability Services enable us to achieve significant operational efficiencies and the end result is better customer service.”

Commerce Bank has this new NCR service deployed on 500 of its ATMs and Edwards reports that Commerce has already reduced downtime by over 25 percent. “When an ATM is up, we’re better able to serve our customers,” he said. “It’s a very basic value proposition.”

### Understanding the True Impact

Today, ATM uptimes are generally high, but that isn’t the whole story. Best-in-class customer availability is often defined as 98.25 percent. NCR raises that percentage higher and even the slightest increase in uptime can have an impact. Even a one percent improvement in availability can add 3.6 days of uptime per ATM per year. For institutions with ATM populations of over 1000, the impact can be well in excess of \$1 million! The loss in customer satisfaction can be even more costly, especially in today’s competitive environment.

High availability is more than just a hardware issue. High availability depends on the interplay of multiple variables including hardware, software,

people skills, and other operational issues that may impact an ATM being down or staying down longer than necessary. Each institution is different and NCR works closely with customers to consult and implement a variety of key decision factors, such as defining baseline metrics which include: transaction volumes, help desk efficiency, hours of operation and accessibility, device functionality and sophistication, quality of the cash, reliability of the communication and network infrastructures, quality and service provider efficiency including “cash-in-transit” companies, and the stability of platforms.

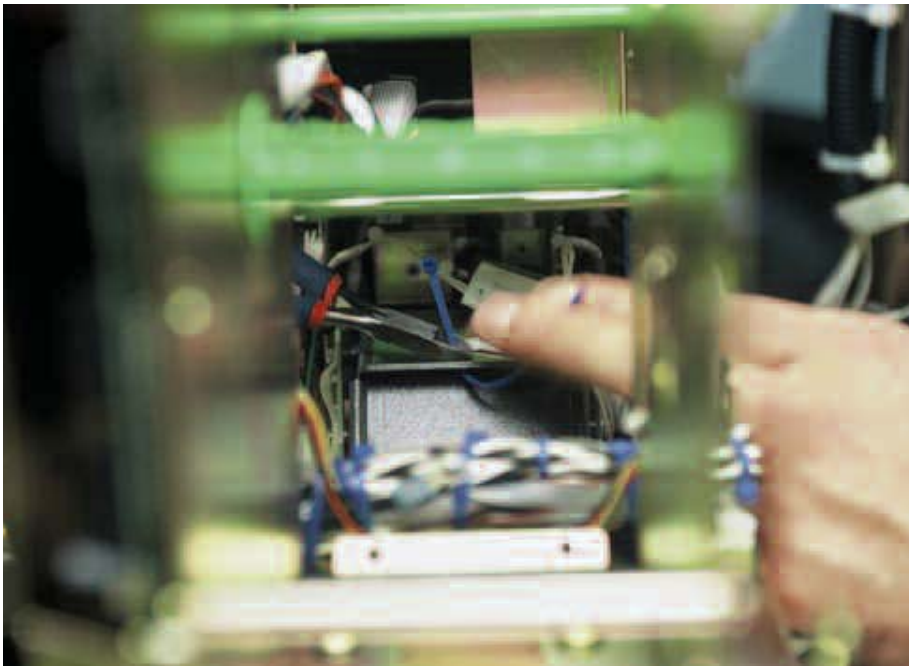
ATM downtime issues usually fall into three categories: cash/first line maintenance faults, communications network faults and hardware faults. The analysis of the complete set of ATM error codes is at the heart of NCR’s High Availability Services strategy. Whereas general industry tactics compress ATM error codes from more than 1800 per unit to 200 or fewer error codes, NCR has worked with network partners to upload the full set of 1800+ codes to its unique analysis engine, powered by NCR’s Teradata® data warehouse. “We work in close collaboration with our customers and their partners in the evaluation of their data pattern analysis and root cause,” said Brad Luckhaupt, director of Global Services Marketing for NCR’s Financial Solutions Division. “The information gained from ATM status codes combined with NCR’s operational infrastructure, processes, software and many years experience, enables us to correctly read what is going on at the ATM.”

### The Technology in Action

Knowing what’s “really” going on, as it happens, is a key differentiator to the new NCR offering. “In the past, most ATM network software generated generic messages,” said Commerce Bank’s Wade Edwards. “NCR really gets down to what the fine-grained problem is and enables us to respond quickly. It could be a fatal software error or the ATM could be jammed or out of cash. What happens is you might send a technician out with the wrong part or you might discover once the technician is out there that you didn’t need tech help at all.”

The process begins with looking at the thousands of status codes produced by every make and model of ATM. For instance, NCR ATMs alone generate 1,800 different status codes.

Typically, this information is written to an error log inside the ATM and intended to help a service engineer diagnose and fix problems. These error codes are also sent to the ATM’s host computer. “The key problem is that ATM host software generalizes these detailed vendor specific codes into generic information and in the process, important details are lost,” explained NCR’s Luckhaupt. “Our



solution faces that problem head on, as ATM faults are occurring.”

NCR has developed what is called a Self-Service Diagnostic Gateway™ (SSDG). A decisioning system, SSDG ensures that valuable ATM status codes are routed to NCR’s management centers where they are stored and analyzed in real time. With SSDG, NCR can proactively identify, manage and resolve ATM availability issues, regardless of manufacturer, ATM age or software platform. SSDG is not an ATM component or a piece of hardware. It’s a software-driven capability, a real-time analytical “brain” that captures and evaluates message strings. It can be deployed on any model of ATM.

“There’s tremendous value that can be derived from the ability to read the message strings emanating from all ATMs. SSDG is a solution to a problem that frustrates ATM owners, vendors and service organizations around the world,” said Luckhaupt. “With SSDG, NCR technicians are no longer trying to diagnose problems only when they arrive at the ATM. We’ve gathered and analyzed more complete information than anyone in the industry and put it to use before faults actually occur”

### Replacing Break/Fix with Analyze/Predict = More Availability

Using a combination of SSDG, data analysis and customer specific information, NCR can also anticipate availability problems and prevent them from happening in the first place. If preventive action is not possible, availability issues are either remotely redirected to a third party (in the case of an error NCR doesn’t need to fix such as the ATM being out of cash) or dealt with by an appropriately skilled first or second line NCR technician who—thanks to SSDG—is dispatched with the correct parts, tools and error description.

First Hawaiian Bank, an NCR High Availability Services customer, is seeing immediate benefits by having better error information right in front of them. “Cash replenishment faults are now routed directly to the branch. Problems that look like they can be fixed at the branch go right to the branch so they can take a crack at them,” said Tony Ipsarides, director of product management at eFunds, a leading provider of electronic payments, risk management, and related outsourcing solutions. “If they feel they can’t resolve the issue, they can respond back to our system in real time which automatically dispatches a technician with the correct tools and parts.”

Keith Taylor, senior vice president of NCR’s Financial Solutions Division, said, “This is truly a sea-change in ATM servicing. When we show this to our customers, they are truly wow’d. They know what downtime costs. They know they can’t afford to lose customers to the competition over an



inconvenience like ATM downtime. Resolving what on the surface seems like a simple issue, is really much more complex than some anticipate. We put the very best analytics and talent on this for the past three years and believe me, our customers are very happy we did!”

### NCR: A Culture of Innovation

Continual improvement, raising the bar, always looking beyond what is good for what is better: these are intrinsic aspects to the NCR corporate culture. This culture has a direct impact on NCR solution quality and creativity.

“NCR continually looks hard at how to be more efficient and how to add more value to the service organization,” said Jeff Davison, managing director



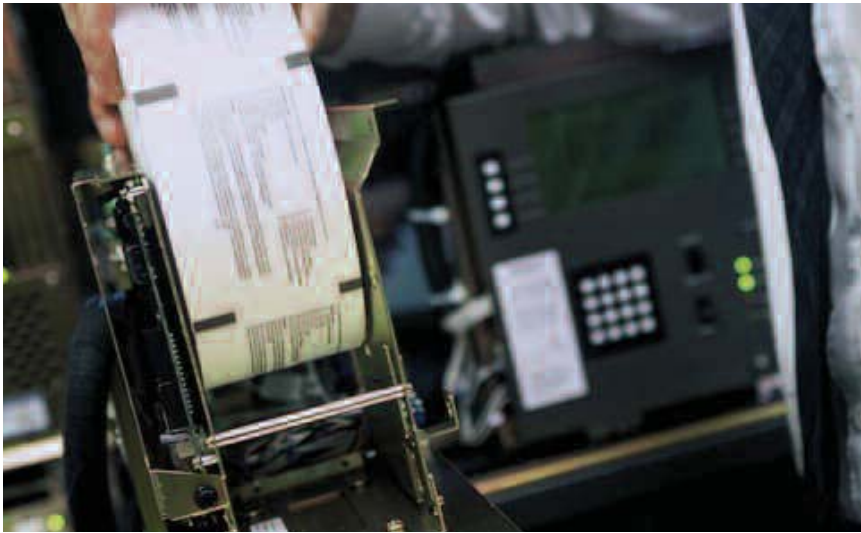
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### More Results

- Over 167 customers representing more than 45,000 ATMs globally are using NCR’s High Availability Services solution
- Remote resolution improved 4% to 10%
- “No fault found” dispatches decreased by 5% to 10%
- Onsite service calls reduced by up to 20%
- Significant reduction in out of scope maintenance charges
- Improved first visit resolution
- Increased customer loyalty

For more information, contact your NCR Sales representative or call 1-800-CALL-NCR.



of Gaspar Corporation, the world's leader in self-service management tools. "The analysis of service calls and slicing and dicing of the service call information led them directly to developing the High Availability Service. NCR knew that data is valuable often in ways that aren't initially seen."

It's important to note that NCR's solution is not an enhancement of its existing service capabilities, but instead a new way of delivering service information.

Added Luckhaupt, "The best part is that the benefit of this offer is so great for our customers that we offer it as a standard part of NCR servicing contracts. Regardless of whether the contract is for second line maintenance or our full managed services, customers can derive substantial benefits from this capability. Successfully implementing a High Availability solution takes a partnership where all sides willingly look at the full scope of their operations and implement what the data says will make that operation more successful."

### The High Availability Continuum

NCR receives millions of status messages each year. This data and resulting actions are recorded and analyzed continuously in NCR's world-leading Teradata data warehouse.

NCR is able to determine where there could be improvements by integrating components, processes, experience and systems into an ongoing cycle of service improvement. NCR refers to this cycle of service enhancement as the high availability continuum. It means working closely with customers and business partners to make sure that improvement is ongoing.

"The whole idea at NCR is: how they can deliver a better product and how they can deliver better service," said Jeff Davison. "It's not the kind of thing where the work ends with deployment of the solution. NCR's High Availability Service is behind each service offer and it represents an ongoing process and best practice. As the industry changes and as NCR learns more, they improve the offering. That's where the ability to work with data

and to work with partners comes in. Fully embracing process and continual improvement is the value of NCR's High Availability offering."

### NCR High Availability Services Up and Running Worldwide

Although the solution was first piloted in 2003, NCR just formally began marketing its High Availability Services mid-year and is busy completing a global roll-out. Already some 167 customers have deployed this unique approach to ATM service. To date, NCR has remotely resolved over 73,000 incidents for more than 45,000 ATMs around the world.

So, why did NCR hold off publicly talking about this new solution? Stated Luckhaupt, "A key success factor in our solution comes from the data analysis and learning we have gathered as a result of working with many different customers in many different regions. The learnings and expertise gathered from each customer provide insight and value which strengthens the solution and is applied to the next customer. The complexity of the analysis and partnerships needed to pull it off can not be done overnight. Today's customers are reaping the benefit of three years of data analysis and real time implementation."

And what do the customers say? "We recognize that our customers expect us to always be there for them," said Mr. Edwards at Commerce Bank. "This is a technology that serves our brand, and helps us to operate more efficiently. To us, it is a win-win-win." ■

### NCR At A Glance

**Business:** leading global technology company that helps business build stronger relationships with their customers. NCR's ATMs, retail systems, Teradata® data warehouses and IT services provide Relationship Technology™ solutions that maximize the value of customer interactions and help organizations create a stronger competitive position.

**Financial Solutions Division:** #1 in ATMs worldwide for 18 consecutive years

**Headquarters:** Dayton, Ohio

**Founded:** 1884

**Number of employees:** 28,300

**Web site:** [www.ncr.com](http://www.ncr.com)

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