

**Remote Recovery
from a
Data Center Outage**

SecureAgent Software®

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Downtime—Now More Expensive than Ever!

Managing a data center has never been more challenging. Today's data center manager is tasked with being more productive with fewer resources, and the data center is often viewed as a cost center rather than as a profit source. So, it must offer efficient operations to the rest of the organization.

In such a business environment, a traditional response to downtime leads to reduced productivity and staggering financial costs. Direct costs and lost revenue opportunities mount.

Published statistics for various industries bear this out.

<i>Industry Sector</i>	<i>Average Revenue Loss per Hour of Downtime</i>
Energy	\$2.8 million
Telecommunications	\$2.0 million
Manufacturing	\$1.6 million
Financial Institutions	\$1.4 million
Information Technology	\$1.3 million
Insurance	\$1.2 million
Retail	\$1.1 million
Banking	\$996,000

Source: Meta Group, October 2000

This represents an average of over \$1.25 million in lost revenue per hour of downtime for the industries listed—nearly \$21,000 per minute! With such losses, no company can afford to have its data center down for long. Downtime equals burning money!



The Traditional Way

By tradition, when unplanned downtime occurs, data center operators try to correct the problem. If that isn't possible, system support analysts are called. Even if they are on-site, they might not be brought in immediately. If they

are off-site, further delays occur due to travel time. Meanwhile, those minutes keep ticking and money keeps burning.



\$21,000 per minute in lost revenue isn't small change!

A Better Solution

At an average of almost \$21,000 of lost revenue per minute of downtime, it won't be long before upper management becomes concerned. There has to be a better way.

That way incorporates hardware and software that help you recover from unexpected downtime more efficiently than with traditional practices.

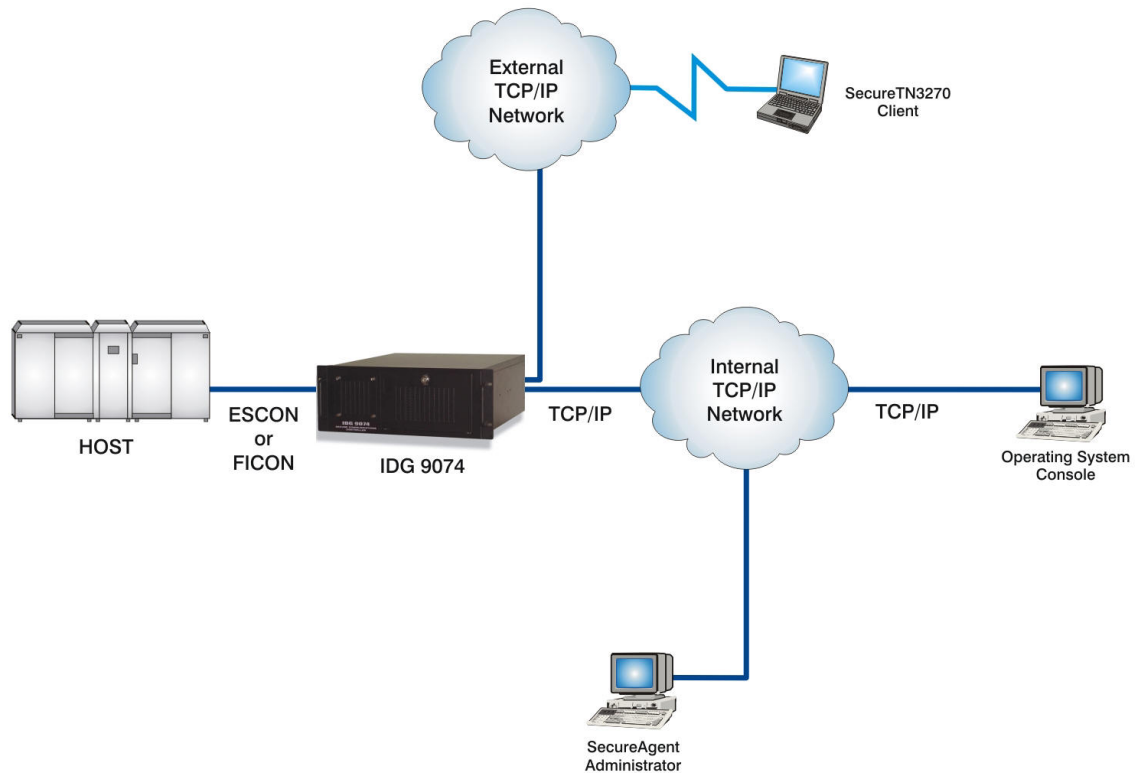
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SecureAgent Software offers that better solution. Our family of patented IDG 9074[®] Secure Communications Controller[®] hardware and SuperVision[®] software offers features that help minimize or even prevent downtime, including:

- **Secure Remote Access** from anywhere in the world at any time. All data is encrypted and compressed. Our unique user authentication method ensures that passwords are never transmitted over the network.
- Easy **remote configuration** and diagnostics, including the ability to restrict individual users at the command level.
- **Instant Replay**—View screen-by-screen playback of connected sessions, from local or remote locations.
- **Automatic Network Recovery**—If a loss of network connectivity is detected, a switch is made immediately to an alternate network path.
- Automatic **monitoring of host sessions** and **automated response** to user-defined events and messages, as well as automatic notification of operations staff (*including* automated voice page). Easily customized through SecureAgent's extensions to the REXX language with the included Automation Rules Editor.

A Scenario

The figure below reflects a typical IDG 9074 installation for our customers.



The following scenario is one that many of our customers have told us they've experienced; it's told by the off-site support analyst on call. Imagine that this is happening at **your** data center:

<u>Time</u>	<u>SecureAgent Solution</u> <u>IDG 9074 Family</u>	<u>Traditional Solution</u> <u>IBM 3174</u>
3:01 a.m.	The phone rang me out of a sound sleep. The automated voice on the other end of the line (automatically generated as SuperVision scanned messages from the mainframe) said we had a problem.	The on-site operator notices a problem, and begins trying to determine its cause, but does not notify anyone.
3:04 a.m.	Trying not to wake my spouse, I went into the room I use as a home office and sat down at the PC.	The on-site operator is still trying to determine what the problem is and its cause.

<u>Time</u>	<u>SecureAgent Solution IDG 9074 Family</u>	<u>Traditional Solution IBM 3174</u>
	<p>I brought up SuperVision, which allowed me to see the on-site operator's terminal just as if I was in the data center, and connected to PROD1.</p> <p>While waiting for the connection to open, I called the Data Center and asked for the PROD1 operator.</p> <p>After logging in to PROD 1, I opened the Instant Replay window. It showed, line-by-line, what had been displayed on and been typed into the operator's console.</p> <p>As we talked, we could both look back through the events since midnight, when the on-site operator's shift had started.</p>	
3:10 a.m.	<p>And there it was...the on-site operator—a new employee—had shut down JES—accidentally, to be sure, but still shut it down. Not bad—It had only taken six minutes to discover the problem.</p>	<p>The on-site operator decides to contact the off-site support analyst on call for assistance.</p>
3:20 a.m.	<p>As I talked to the operator about why shutting down JES was not a good thing to do, especially in the middle of the night, I also sent the senior data center personnel and our data center administrator an e-mail requesting that the new operator be restricted from shutting down JES.</p>	<p>The off-site support analyst decides that trying to figure out over the phone what the operator did is not working. He is going to have to go in to the data center.</p>
3:25 a.m.	<p>From my laptop at home, I restarted JES, and looked at my watch. I said goodnight to a very embarrassed new operator, and went back to bed.</p>	<p>The off-site support analyst begins driving to the data center.</p>

<u>Time</u>	<u>SecureAgent Solution IDG 9074 Family</u>	<u>Traditional Solution IBM 3174</u>
4:05 a.m.	Off-site support analyst is asleep	The off-site support analyst arrives at the data center complex after 30 minutes (by itself equivalent to \$630,000 in lost revenue).
4:10 a.m.	Off-site support analyst is asleep	The support analyst and the on-site operator begin working to solve the problem.
4:25 a.m.	Off-site support analyst is asleep	After discussing the on-site operator's actions, the support analyst guesses JES was accidentally shut down (though the operator won't admit it).
4:30 a.m.	Off-site support analyst is asleep	The support analyst then restarts JES.
5:10 a.m.	Off-site support analyst is asleep	The support analyst leaves the data center and arrives back home.
6:15 a.m.	Off-site support analyst gets up to go back to work.	The support analyst gets ready to go back to work.
2:00 p.m.	At the staff conference later that day, we looked at the various log files and discussed exactly what happened. We all agreed that Secure Remote Access and Instant Replay were critical to our prompt recovery. From now on, our policy is that new operators will not have access to commands that shut down JES.	Upper management calls a meeting to determine why the outage occurred, why it lasted so long, and who is responsible.
Elapsed Time	24 minutes	1 hour, 29 minutes
Average Cost (in lost revenue)	\$504,000	\$1,869,000

The Cost of Peace of Mind

Secure Remote Access and Instant Replay are features needed for rapid off-site recovery. The cost of SecureAgent hardware and software depends on the features you need, but typically the initial cost is equivalent to between 1 and 5 minutes of downtime.

What About Recovering from a Major Disaster?

The scenario presented above describes a relatively common sort of problem, one that was easily resolved in a reasonably short time with limited resources. But what about more extensive problems—such as natural disasters or terrorist attacks—where the data center is completely disrupted or not accessible?

One of SecureAgent's customers is a major financial services company. On September 11, 2001, they lost communication lines, had to evacuate their New York office, and were unable to get back into their data center. In less than an hour, they had moved to a temporary location, remotely connected to their mainframe using SecureAgent products, and were up and running again—in minutes instead of hours or even days. Most of their clients never even knew a disruption had taken place.

For Further Information

We would be happy to discuss the details and advantages of SecureAgent solutions in light of your specific requirements. Please contact your SecureAgent representative at:

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