



# Email Continuity Success: Achieving true continuity with Mimecast

Correctly balancing availability, recovery and continuity strategies

## A Guide to achieving true email continuity

### *Correctly balancing availability, recovery and continuity strategies*

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“ Conventional approaches to email continuity are technically complex, expensive to operate and maintain and invoking them can usually only be justified in the most serious of disasters. ”

“ Mimecast changes this picture completely by delivering a unique gateway based email Continuity solution as a service via the Internet. ”

All email systems will fail at some stage. Failure can result from software error, hardware failure, a storage problem, human error, a utility outage, a network problem, or a catastrophe such as a flood, fire or theft. Understanding these possibilities enables companies to plan, provision and protect their services appropriately and to avoid the significant costs and risks that email failure will present to their business.

End users rate email as their number one application and place a heavy reliance on it for many business functions. Email downtime is a source of real aggravation, lost productivity, reputation risk, potential regulatory consequence and lost trade. Protecting the uptime of email service and email data access is therefore a key responsibility of IT professionals.

Unfortunately conventional approaches to email continuity are technically complex, expensive to operate and maintain, and invoking them can usually only be justified in the most serious of disasters. They also do not cater for many downtime scenarios and leave many organizations inadequately protected despite their significant investments. The cost of ensuring email uptime remains a prohibitive factor, and many organizations IT budgets are already under pressure to deliver more business value.

Mimecast changes this picture completely by delivering a unique gateway based email continuity solution as a service via the Internet. Mimecast's service is complimentary to any existing investments in email uptime and will comprehensively increase uptime capabilities with a modest budget and at no additional cost for existing Mimecast users.

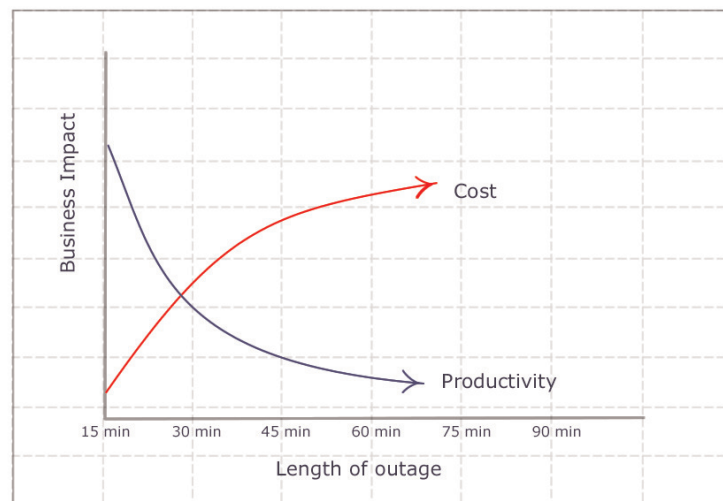


Fig1. Escalation of negative impact during an email outage.

“ Many companies do not yet make the distinction between Availability, Recovery and Continuity. ”

To understand Mimecast's role in protecting email uptime let's consider the three key strategies that IT departments must invest in to succeed at meeting their organization's demand for email uptime. These three strategies are Availability, Recovery and Continuity.

### **Availability Strategy**

Availability investments seek to ensure that systems never fail, or that the possibility of them failing is reduced. Typically this includes the use of redundant and resilient infrastructure. (e.g.: RAID hard drive systems, system clustering, and redundant network topologies). In theory there is a direct correlation between the amount spent on availability technologies and the levels of uptime subsequently achieved. However due to the localized nature of availability systems, the persistence of single points of failure elsewhere and the fallibility of many availability technologies at either a hardware or software level, companies still need to plan for the potential failure of these systems. Often, realization of these limitations is only discovered during an outage, real or simulated.

### **Recovery Strategy**

Recovery strategies are designed to ensure that if and when something goes wrong, systems can be recovered and services can be restored within an acceptable timeframe. Typical technologies include tape backup solutions, online backup, and offsite data replication with standby mail servers.

Recovery strategies have two performance criteria, firstly they seek to avoid any loss of data as a result of a system failure and secondly minimizing the recovery period. Recovery is seldom achieved without some degree of data loss as systems can only be recovered to the point at which the last working back-up was taken. Reducing the recovery period substantially requires significant budget as additional hardware, real-time data replication infrastructure, advanced IT skills, and offsite facilities must be made available.

Recovery of backed up data is by no means a guarantee that restored systems will be fully functional. Mail servers rely on large monolithic file structures and errors can take extended periods of time to occur.

Even when the recovery period has been reduced by the application of technical solutions, the business may still suffer extended downtime in many disaster scenarios. This is due to the management processes that must be followed by a company during a disaster. This may include the convening of a crisis committee who will assess the extent of the problems, consider the risks and impact, explore various resolution scenarios, and then finally may give the go ahead to IT to invoke their part of the DR plan. Human involvement and management processes will impose significant latency on what otherwise could be a shorter technical recovery period.

Reversing the DR plan and returning business systems to normal after the disaster is dealt with is also a resource intensive process. Recovery plans are therefore seldom invoked trivially.

“ Correctly balancing these strategies enables companies to achieve an optimal level of email service uptime well within their budgets. ”

“ Mimecast has aggressively innovated to provide an email Continuity service via the Internet. ”

“ This offers companies the missing piece of the email uptime puzzle by enabling IT professionals to provide an instantly available standby email service to their users. ”

“ Mimecast will automatically queue and provide real-time access to new emails that are pending inbound delivery. ”

“ End users are able to access emails in the inbound queue as if they were in an inbox. ”

One also cannot assume that all recovery processes will go according to plan. Key technical staff may not be immediately available, recovery systems and technology may fail, and the disaster may affect your recovery infrastructure too. It is sensible to augment a Recovery strategy with a Continuity strategy that provides an independent set of service options to your business.

### Continuity Strategy

A Continuity strategy provides the option of continuous access to services during a system failure via an independent offsite infrastructure. This infrastructure is typically loosely coupled with the primary email system.

It can be used to keep users productive and communicating during the lag before a full system recovery plan is invoked, whilst it is underway or indeed as an alternative to invoking a full failover to a recovery system.

It can also be made available to end users during a minor outage, planned downtime or maintenance making the cost and complexity of switching to a full production recovery site unnecessary.

Most companies have not yet identified how to achieve this level of continuity strategy with essential services like email. Without this contingency in place they feel compelled to over-invest in both Availability and Recovery strategies which in reality may keep the availability of services such as email at a surprisingly low level.

### Making the distinction

Many companies do not yet make the distinction between Availability, Recovery and Continuity. By fully understanding the separate options available in each strategy, companies can avoid over-investing, be more responsive to their end users needs, and eliminate their exposure to a broader set of risks. Correctly balancing these strategies enables companies to achieve an optimal level of email service uptime well within their budgets.

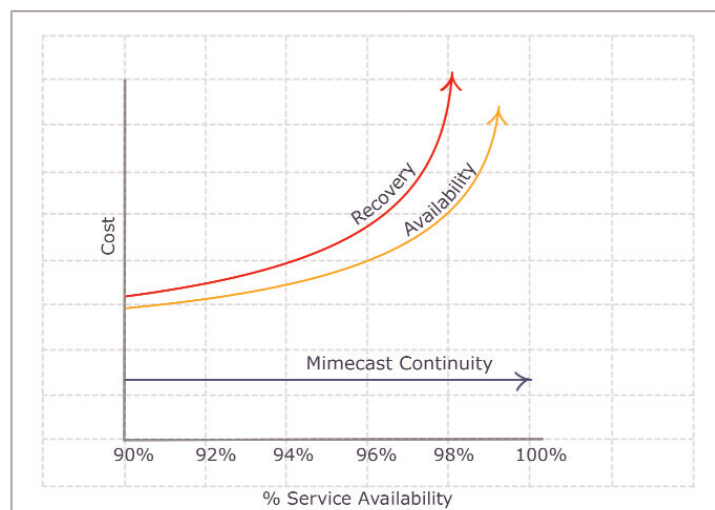


Fig. 3 Comparative costs of reducing downtime

“ It enables you to deliver a "business as usual" capability during what might otherwise have been a significant and costly event for your business. ”

### The solution

To help meet these challenges, Mimecast has aggressively innovated to provide an email Continuity service via the Internet. This capability is available as a standard part of the Mimecast service, which also includes a remote geographically diverse MTA and sophisticated routing infrastructure, advanced email security and policy control, reporting tools, and long term email storage, all delivered as a utility style service.

Mimecast is the only company to provide this unique Continuity service as a part of a fully integrated email management platform. This offers companies the missing piece of the email uptime puzzle by enabling IT professionals to provide an instantly available standby email service to their users.

“ To achieve this result, Mimecast architected and developed a unique and powerful MTA software platform, delivered from a highly secure and resilient infrastructure. ”

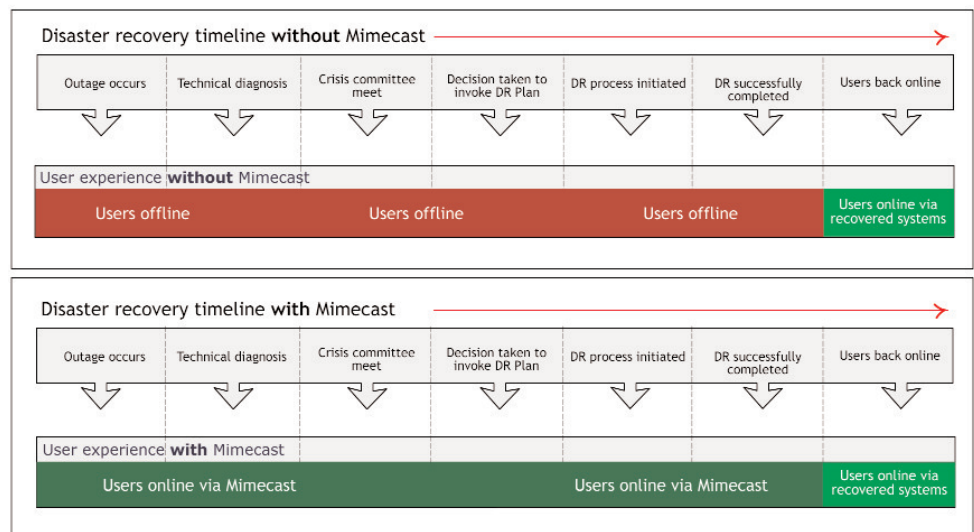


Fig 2. Disaster recovery timeline & user experience

### The Mimecast Difference

Mimecast provides a geographically diverse and resilient MX gateway infrastructure that incorporates advanced security functions and sophisticated MTA tools such as split routing and online queue management. Mimecast provides online administration tools which put complete real-time control over these services in the hands of their client's administrators.

In a disaster or when your primary email system or network fails, Mimecast will automatically queue and provide real-time access to new emails that are pending inbound delivery.

This access can be provided directly to end users who can read, reply, forward their own email and create new messages via an easy to use web mail facility. Users' access to this facility can be authenticated against existing network log-in credentials via Mimecast Active Directory Sync. Staff are also provided with rich search and access to a configurable amount of email history stored by Mimecast.

“ Mimecast provides online administration tools which put complete real-time control over these services in the hands of their client's administrators. ”

“ Companies around the world use Mimecast's email continuity service as an integral part of their uptime strategy. ”

Unlike other continuity solutions, the Mimecast service does not require any manual rerouting or delivery to a second mail server, nor does it require any agents or applications installed onsite.

End users are able to access emails in the inbound queue as if they were in an inbox. Should queue re-routing be required to an alternate mail server for recovery, this can be configured via the Mimecast administration console in real-time.

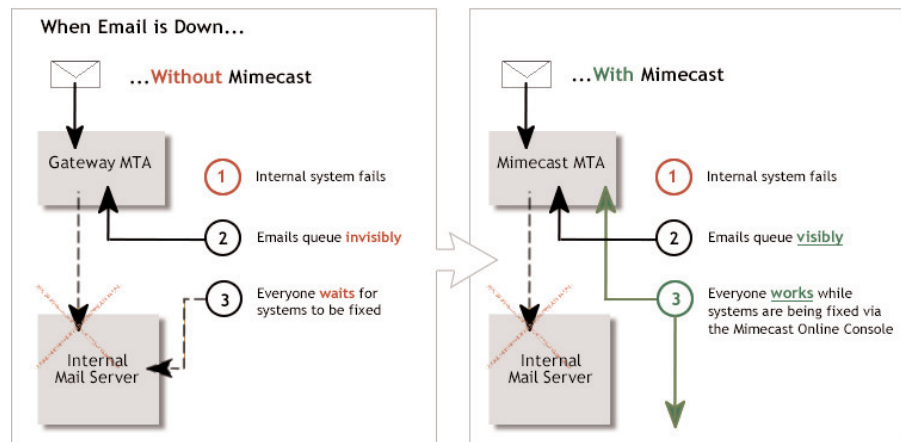
Alternatively once your primary email system is recovered, emails will seamlessly move to each end users primary inbox, including all emails they have sent during the outage.

Companies around the world use Mimecast's email continuity service as an integral part of their uptime strategy as it provides an extremely cost effective, instantly available and unobtrusive continuity facility.

Mimecast can be relied on in practically any disaster scenario to keep the business functioning. It enables you to deliver a "business as usual" capability during what might otherwise have been a significant and costly event for your business.

“ Mimecast can be relied on in practically any disaster scenario to keep the business functioning. ”

**Here is how it works**



**User experience with Mimecast**

- Direct access to incoming queued email via end user webmail service
- Read, reply, forward and create new messages
- Search and access historic email (up to 10 years of data)

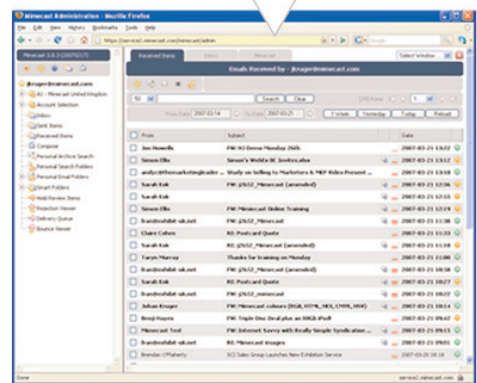


Fig. 4 How Mimecast keeps users working

### Unique gateway architecture

Rather than looking at bolstering the primary in-house email infrastructure which is the domain of availability and recovery strategies, Mimecast works upstream and "in the cloud" at the gateway MTA to deliver true continuity capabilities.

This is a logical place to deliver continuity as it is:

- a. independent from and loosely coupled with the primary infrastructure
- b. already the point of receipt (via MX records) and delivery for emails in the company's domain

Furthermore, it makes sense for Mimecast to provide these continuity services as it:

- c. stores and provides access to a retained cache of emails which are useful for both continuity and recovery
- d. delivers services from a resilient geographically diverse computing grid
- e. offers end user log-in access based on the Microsoft Active Directory credentials
- f. provides rich queue visibility management options to administrators

To achieve this result, Mimecast architected and developed a unique and powerful MTA software platform, delivered from a highly secure and resilient infrastructure.

### Applicability of strategies in event of system failure

Causes of failure	Availability	Recovery	Continuity
Mail server hardware failure	✓	✓	✓
Mail server software/OS failure		✓	✓
Mail server database corruption		✓	✓
Mail server backup file corruption			✓
Operator error		✓	✓
Power outage	✓		✓
Local network failure	✓		✓
Internet connectivity failure			✓
Physical disaster (flood, fire)		✓	✓

### A final note on Recovery

Practically all recoveries from backup are prone to risk and failure. This can make the recovery period unpredictable and the date of the last good backup may indeed not be the most recent back-up run. Problems such as database corruption typically develop within a system over a period of time meaning that the company may have to go back to previous backup data to eliminate corruption and effectively prevent its reoccurrence. In all cases the last successful backup will almost certainly not contain all recent data as the outage may have occurred some hours or even days after this backup was taken.

Mimecast keeps cached copies of emails for a configurable period within client's Mimecast accounts and hence is able to offer a unique data replay service. This can redeliver missing emails back to a mail server after a recovery from backup. This helps clients to achieve their recovery objective of zero data loss, and provides enhanced protection against failure in the recovery process.

### **About Mimecast**

Mimecast is the leading innovator in the Software as a Service business email management market. The company provides best practice messaging security, storage, continuity, business information management and policy control to clients around the world via a unified internet based architecture. Mimecast was founded in late 2002, and is headquartered in the UK.

### **Where to now?**

Mimecast offers a personal live demonstration via the web. To request a demonstration contact us on:

[www.mimecast.com](http://www.mimecast.com)  
[info@mimecast.com](mailto:info@mimecast.com)