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Sinch E-Mail 365 Bounce classification

Version 4.1 – February 2022

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Revision History

Version	Date	Description
1.0	2018-06-06	Baseline draft
1.1	2018-07-01	Added updates for June 2018 release
2.0	2019-01-07	Added a few more exceptions that will be implemented in the January 26, 2019 release
2.1	2019-01-14	Added an explanation of why some codes have been re-classified.
3.0	2020-08-05	Updated bounce error list
4.0	2021-11-16	Updated bounce error list
4.1	2022-02-23	Updated bounce errors list



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1 Document Purpose

The purpose of this document is to classify email Bounce Records in terms of Hard and Soft against the published SMTP and DSN Codes. When deciding which of these should either be Hard or Soft the general rule followed is an SMTP 4XX is classed as a Temporary Bounce and SMTP 5XX, a Permanent Bounce. However, under certain circumstances it has been observed an 5XX can be returned for Temporary reasons, for example, Blacklisting plus other nonpermanent causes. We have therefore decided to re-classify these types of errors as a Soft Bounce.

In making these re-classifications It's important to note we strongly recommend all customers employ a Soft Bounce policy to avoid situations where the nature of the Soft Bounce actually is more persistent and can be viewed as a Permanent error i.e. where an ISP has decided to permanently block emails to such Contact addresses. The recommended outcome of a Soft Bounce policy would be the Contact would be placed on an Opt-Out list, which allows the capability to re-introduce such a Contact should the ISP restriction be eventually removed.



2 Bounce Error Codes

An illustrative list of bounces and what to do is provided below:

SMTP error codes	Interpreting the code	Bounce Type	Exceptions
420	"Timeout connection problem": there have been issues during the message transfer.	SOFT	
421	The service is unavailable due to a connection problem: it may refer to an exceeded limit of simultaneous connections, or a more general temporary problem.	RETRY (temporary status not sent back as bounce)	
422	The recipient's mailbox has exceeded its storage limit.	SOFT	
431	Not enough space on the disk, or an "out of memory" condition due to a file overload.	SOFT	
432	Typical side-message: "The recipient's Exchange Server incoming mail queue has been stopped".	SOFT	
441	The recipient's server is not responding.	SOFT	



442	The connection was dropped during the transmission.	SOFT	
446	The maximum hop count was exceeded for the message: an internal loop has occurred.	SOFT	
447	Your outgoing message timed out because of issues concerning the incoming server.	SOFT	
449	A routing error.	SOFT	
450	"Requested action not taken – The user's mailbox is unavailable". The mailbox has been corrupted or placed on an offline server, or your email hasn't been accepted for IP problems or blacklisting.	SOFT	
451	"Requested action aborted – Local error in processing". Your ISP's server or the server that got a first relay from yours has encountered a connection problem.	SOFT	
452	Too many emails sent or too many recipients: more in general, a server storage limit exceeded.	SOFT	



454	This issue typically applies to Virtual Private Servers and Dedicated Servers. If email delivery fails with this error message: 454 TLS currently unavailable, it means the mail server is misconfigured. TLS relates to SSL setup for the mail server. This can happen due to expired SSL certificate or improperly configured SSL	SOFT	
471	An error of your mail server, often due to an issue of the local antispam filter.	SOFT	
500	A syntax error: the server couldn't recognize the command.	SOFT	
5XX	If the SMTP Code is 5XX (552, 554 and 599) and the text is matching – “exceeded storage” “mailbox is full” and “over quota” for DSN code 5.2.2	SOFT	
501	Another syntax error, not in the command but in its parameters or arguments.	SOFT	
502	The command is not implemented.	HARD	



503	The server has encountered a bad sequence of commands, or it requires an authentication.	HARD	
504	A command parameter is not implemented.	HARD	
510/511	Bad email address.	HARD	
512	A DNS error: the host server for the recipient's domain name cannot be found.	HARD	
513	"Address type is incorrect": another problem concerning address misspelling. In few cases, however, it's related to an authentication issue.	HARD	
523	The total size of your mailing exceeds the recipient server's limits.	SOFT	
530	Normally, an authentication problem. But sometimes it's about the recipient's server blacklisting yours, or an invalid email address.	HARD	
541	The recipient address rejected your message: normally, it's an error	SOFT	



	caused by an anti-spam filter.		
550	It usually defines a nonexistent email address on the remote side.	HARD	<ul style="list-style-type: none"> • response text could not be identified • The message failed for unspecified reasons. • The message bounced due to the remote mailbox being over quota. • The receiver will not relay for that domain. “Blocked” or “Proofpoint” • sender rejected for DSN 5.1.0 • blocked for containing SPAM for DSN 5.7.1 • "ERS-Customized-Block for DSN 5.7.1 • reverse lookup rejected • Message considered as spam or virus for DSN 5.7.0 • Connection frequency limited for DSN 5.0.0 • This IP has sent too many messages



			this hour for DSN 5.1.0
550	<p>*Quota Exceeded</p> <p>*Mailbox Unavailable</p> <p>*Unknown local</p> <p>recipient address rejected: access denied</p> <p>recipient addresses rejected: access denied</p> <p>recipient addresses rejected : access denied</p> <p>for DSN code 5.4.1</p>	SOFT	
551	<p>"User not local or invalid address – Relay denied". Meaning, if both your address and the</p>	HARD	

Note: Error codes in 400 series typically imply soft bounces and those in the 500 series typically imply hard bounces.

Table 1: Bounce error codes



	recipients are not locally hosted by the server; a relay can be interrupted.		
552	"Requested mail actions aborted – Exceeded storage allocation": simply put, the recipient's mailbox has exceeded its limits.	SOFT	
553	"Requested action not taken – Mailbox name invalid". That is, there's an incorrect email address into the recipient's line.	HARD	<ul style="list-style-type: none"> • rejected for possible spam/virus content for DSN 5.3.0
553 & 550	<ul style="list-style-type: none"> *Domain of sender address does not exist *Domain Not found for DSN code 5.1.8 	SOFT	
554	<p>*This means that the transaction has failed. It's a permanent error and the server will not try to send the message again.</p> <p>*Mailbox Full</p> <p>Nonexistent destination domain</p> <ul style="list-style-type: none"> • user does not have a * account • Recipient address rejected: Unknown recipient • This account has been disabled or discontinued • Mailbox Full <p>DSN 5.2.2</p>	SOFT	

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