

Email Authentication Status Codes
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Abstract

There is at present no way to return a status code to an email client that indicates a message is being rejected or deferred specifically because of email authentication failures. This document registers codes for this purpose.

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1. Introduction

[RFC3463] introduced Enhanced Mail System Status Codes, and [RFC5248] created an IANA registry for these.

[RFC6376] and [RFC4408] introduced, respectively, DomainKeys Identified Mail and Sender Policy Framework, two protocols for conducting email authentication.

The current set of enhanced status codes does not include any code for indicating that a message is being rejected or deferred due to negative results in either of these two mechanisms. This document introduces an enhanced status code for reporting those cases to clients.

2. New Status Codes

The following new status codes are defined:

2.1. DKIM Failures Code

Code: X.7.19
Sample Text: DKIM signature failed to validate
Associated basic status code: 5
Description: This status code is returned when a message contained a valid DKIM signature, but the signature failed to validate, contrary to local policy requirements.
Reference: [this document]
Submitter: M. Kucherawy
Change controller: IESG

Code: X.7.20
Sample Text: DKIM signature absent
Associated basic status code: 5
Description: This status code is returned when a message contained no DKIM signature, contrary to local policy requirements.
Reference: [this document]
Submitter: M. Kucherawy
Change controller: IESG

2.2. SPF Failures Code

Code: X.7.21
Sample Text: SPF validation failed
Associated basic status code: 5
Description: This status code is returned when a message failed an SPF check, contrary to local policy requirements.
Reference: [this document]
Submitter: M. Kucherawy
Change controller: IESG

3. Security Considerations

Use of these codes reveals local policy with respect to email authentication, which can be useful information to actors attempting to deliver undesirable mail. It should be noted that there is no specific obligation to use these codes; if an operator wishes not to reveal this aspect of local policy, it can continue using a generic result such as 5.7.7 or even 5.7.0.

4. IANA Considerations

Registration of two new enhanced status codes, for addition to the SMTP Enhanced Status Codes Registry, can be found in [Section 2](#).

5. Normative References

- [RFC3463] Vaudreuil, G., "Enhanced Mail System Status Codes", [RFC 3463](#), January 2003.
- [RFC4408] Wong, M. and W. Schlitt, "Sender Policy Framework (SPF) for Authorizing Use of Domains in E-Mail, Version 1", [RFC 4408](#), April 2006.
- [RFC5248] Hansen, T. and J. Klensin, "A Registry for SMTP Enhanced Mail System Status Codes", [BCP 138](#), [RFC 5248](#), June 2008.
- [RFC6376] Crocker, D., Hansen, T., and M. Kucherawy, "DomainKeys Identified Mail (DKIM) Signatures", STD 76, [RFC 6376](#), September 2011.

Appendix A. Notes to the RFC Editor

[Please remove this section prior to publication.]

[RFC4408] is in the RFC Editor queue as of this writing. It will

need to updated at some point.

[Appendix B](#). Acknowledgments

[TBD]

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