



# XMPP

## XEP-0086: Error Condition Mappings

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A mapping to enable legacy entities to correctly handle errors from XMPP-aware entities.

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## 1 Introduction

[XMPP Core](#)<sup>1</sup> documents formats and semantics for stanza error responses. The XML of these errors is different from that of errors that have been traditionally used on the Jabber network. Until such time that all entities support these new XMPP-style errors, there is a need for entities to issue errors that are understandable by both legacy and XMPP-compliant entities. This document outlines an appropriate mapping to allow this to occur. This document can also be used by implementers of legacy protocols to determine which XMPP-style error should be used when only a legacy error code is documented.

## 2 Supporting Legacy Entities

XMPP-compliant entities can issue errors to legacy clients and servers by adding a "code" attribute to the `<error/>` element it sends.

Listing 1: A simple error response

```
<message
  to='juliet@capulet.com/balcony'
  from='romeo@montague.net/garden'
  type='error'>
  <body>Wherefore art thou, Romeo?</body>
  <error code='404' type='cancel'>
    <item-not-found xmlns='urn:ietf:params:xml:ns:xmpp-stanzas' />
  </error>
</message>
```

Legacy entities receiving this error will use the "404" to determine what happened, while XMPP-compliant entities will use the error type and the child element that specifies the condition.

XMPP-compliant entities should add the following error codes to errors if they want them to be understood by legacy entities:

XMPP error condition	XMPP error type	Legacy error code
<code>&lt;bad-request/&gt;</code>	modify	400
<code>&lt;conflict/&gt;</code>	cancel	409
<code>&lt;feature-not-implemented/&gt;</code>	cancel	501
<code>&lt;forbidden/&gt;</code>	auth	403
<code>&lt;gone/&gt;</code>	modify	302 (permanent)
<code>&lt;internal-server-error/&gt;</code>	wait	500
<code>&lt;item-not-found/&gt;</code>	cancel	404

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<sup>1</sup>RFC 6120: Extensible Messaging and Presence Protocol (XMPP): Core <<http://tools.ietf.org/html/rfc6120>>.

XMPP error condition	XMPP error type	Legacy error code
<jid-malformed/>	modify	400
<not-acceptable/>	modify	406
<not-allowed/>	cancel	405
<not-authorized/>	auth	401
<payment-required/>	auth	402
<recipient-unavailable/>	wait	404
<redirect/>	modify	302 (temporary)
<registration-required/>	auth	407
<remote-server-not-found/>	cancel	404
<remote-server-timeout/>	wait	504
<resource-constraint/>	wait	500
<service-unavailable/>	cancel	503
<subscription-required/>	auth	407
<undefined-condition/>	[any]	500
<unexpected-request/>	wait	400

### 3 Implementing Legacy Protocols

Implementors of legacy protocols should use the appropriate XMPP-style error alongside a legacy error code as specified in the following table:

Legacy error code	Meaning	XMPP error condition	XMPP error type
302	Redirect	<redirect/> (temporary) or <gone/> (permanent)	modify
400	Bad Request	<bad-request/> See also the <jid-malformed/> and <unexpected-request/> stanza errors.	modify
401	Not Authorized	<not-authorized/> See also the <not-authorized/> stream error.	auth
402	Payment Required	<payment-required/>	auth
403	Forbidden	<forbidden/>	auth

Legacy error code	Meaning	XMPP error condition	XMPP error type
404	Not Found	<item-not-found/> See also the <remote-server-not-found/> stanza error.	cancel
405	Not Allowed	<not-allowed/>	cancel
406	Not Acceptable	<not-acceptable/> See also the <unexpected-request/> stanza error.	modify
407	Registration Required	<registration-required/>	auth
408	Request Timeout	<remote-server-timeout/>	wait
409	Conflict	<conflict/>	cancel
500	Internal Server Error	<internal-server-error/> See also the <undefined-condition/> stanza error.	wait
501	Not Implemented	<feature-not-implemented/>	cancel
502	Remote Server Error	<service-unavailable/>	wait
503	Service Unavailable	<service-unavailable/>	cancel
504	Remote Server Timeout	<remote-server-timeout/>	wait
510	Disconnected	<service-unavailable/>	cancel

## 4 Conclusion

Mapping legacy error codes to XMPP-style errors is an inexact science, and there are likely to be inconsistencies in some places. However, it is the authors' belief that the mapping presented in this document will be adequate for the majority of cases, and will help smooth the migration to XMPP-compliant implementations.