

Section	SubSection	Page	No.	Description	Status
3		3	1	The UAS MUST send any non-100 provisional response reliably if the initial request contained a Require header field with the option tag 100rel.	M
3		3	2	If the UAS is unwilling to do so, it MUST reject the initial request with a 420 (Bad Extension) and include an Unsupported header field containing the option tag 100rel.	M
3		3	3	A UAS MUST NOT attempt to send a 100 (Trying) response reliably.	M
3		3	4	If the request did not include either a Supported or Require header field indicating this feature, the UAS MUST NOT send the provisional response reliably.	M
3		3	5	However, it MUST NOT attempt to do so for any request that contains a tag in the To field.	M
3		3	6	Of course, unlike a UAS, when the proxy element receives a PRACK that does not match any outstanding reliable provisional response, the PRACK MUST be proxied.	M
3		4	7	As a more efficient alternative, the UAS can send the response reliably, in which case the UAS SHOULD send provisional responses once every two and a half minutes.	S
3		4	8	Use of reliable provisional responses for extending transactions is RECOMMENDED .	R
3		4	9	In addition, it MUST contain a Require header field containing the option tag 100rel, and MUST include an RSeq header field.	M

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3		4	10		M
3		4	11	The value of the header field for the first reliable provisional response in a transaction MUST be between 1 and $2^{31} - 1$.	M
3		4	12	It is RECOMMENDED that it be chosen uniformly in this range.	R
3		5	13	If a PRACK request is received by the UA core that does not match any unacknowledged reliable provisional response, the UA MUST respond to the PRACK with a 481 response.	M
3		5	14	If the PRACK does match an unacknowledged reliable provisional response, it MUST be responded to with a 2xx response.	M
3		5	15	It SHOULD cease retransmissions of the reliable provisional response, and MUST remove it from the list of unacknowledged provisional responses.	S
3		5	16		M
3		5	17	If a reliable provisional response is retransmitted for $64 \cdot T_1$ seconds without reception of a corresponding PRACK, the UA SHOULD reject the original request with a 5xx response.	S
3		5	18	The UA MUST NOT send a second reliable provisional response until the first is acknowledged.	M

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3		5	19	After the first, it is RECOMMENDED that the UAS not send an additional reliable provisional response until the previous is acknowledged.	R
3		5	20	The value of the RSeq in each subsequent reliable provisional response for the same request MUST be greater by exactly one.	M
3		5	21	Rseq numbers MUST NOT wrap around.	M
3		5	22	In that case, it MUST NOT send a final response until those provisional responses are acknowledged.	M
3		5	23	If the UAS does send a final response when reliable responses are still unacknowledged, it SHOULD NOT continue to retransmit the unacknowledged reliable provisional responses, but it MUST be prepared to process PRACK requests for those outstanding responses.	S
3		5	24		M
3		5	25	A UAS MUST NOT send new reliable provisional responses (as opposed to retransmissions of unacknowledged ones) after sending a final response to a request.	M

Section	SubSection	Page	No.	Description	Status
4		6	1	A Require header with the value 100rel MUST NOT be present in any requests excepting INVITE, although extensions to SIP may allow its usage with other request methods.	M
4		8	2	If the UAC does not wish to insist on usage of reliable provisional responses, but merely indicate that it supports them if the UAS needs to send one, a Supported header MUST be included in the request with the option tag 100rel.	M
4		8	3	The UAC SHOULD include this in all INVITE requests.	S
4		8	4	If the response is a 100 (Trying) (as opposed to 101 to 199), this option tag MUST be ignored, and the procedures below MUST NOT be used.	M
4		8	5		M
4		9	6	The provisional response MUST establish a dialog if one is not yet created.	M
4		9	7	Assuming the response is to be transmitted reliably, the UAC MUST create a new request with method PRACK.	M
4		9	8	In particular, a UAC SHOULD NOT retransmit the PRACK request when it receives a retransmission of the provisional response being acknowledged, although doing so does not create a protocol error.	S
4		9	9	Once a reliable provisional response is received, retransmissions of that response MUST be discarded.	M

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4		9	10	The UAC MUST maintain a sequence number that indicates the most recently received in-order reliable provisional response for the initial request.	M
4		9	11	This sequence number MUST be maintained until a final response is received for the initial request.	M
4		9	12	Its value MUST be initialized to the RSeq header field in the first reliable provisional response received for the initial request.	M
4		9	13	As a result, if the UAC receives another reliable provisional response to the same request, and its RSeq value is not one higher than the value of the sequence number, that response MUST NOT be acknowledged with a PRACK, and MUST NOT be processed further by the UAC.	M
4		9	14		M

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5		10	1	Similarly, if a reliable provisional response is the first reliable message sent back to the UAC, and the INVITE did not contain an offer, one MUST appear in that reliable provisional response.	M
5		10	2	If the UAC receives a reliable provisional response with an offer (this would occur if the UAC sent an INVITE without an offer, in which case the first reliable provisional response will contain the offer), it MUST generate an answer in the PRACK.	M
5		10	3	If the UAS receives a PRACK with an offer, it MUST place the answer in the 2xx to the PRACK.	M
5		10	4	Once an answer has been sent or received, the UA SHOULD establish the session based on the parameters of the offer and answer, even if the original INVITE itself has not been responded to.	S
5		10	5	If the UAS had placed a session description in any reliable provisional response that is unacknowledged when the INVITE is accepted, the UA MUST delay sending the 2xx until the provisional response is acknowledged.	M
5		10	6	All user agents that support this extension MUST support all offer/answer exchanges that are possible based on the rules in Section 13.2 of RFC 3261, based on the existence of INVITE and PRACK as requests, and 2xx and reliable 1xx as non-failure reliable responses.	M

Section	SubSection	Page	No.	Description	Status
7		10	1	This specification defines two new header fields, RACK and RSeq.	7.1 of RFC3262
7		11	2	The RACK header is sent in a PRACK request to support reliability of provisional responses. It contains two numbers and a method tag. The first number is the value from the RSeq header in the provisional response that is being acknowledged. The next number, and the method, are copied from the CSeq in the response that is being acknowledged. The method name in the RACK header is case sensitive.	7.2 of RFC3262
7		7,8	3	Table1, Table 2	Table 1,2 of RFC3262

Section	SubSection	Page	No.	Description	Status
8	8.1	11	1	When present in a Require header in a request, it indicates that the UA MUST send all provisional responses reliably.	M
9		12	2	As these responses can convey important information, PRACK messages SHOULD be authenticated as any other request.	S