

NAME

gss_wrap, **gss_seal** - Attach a cryptographic MIC and optionally encrypt a message

SYNOPSIS

```
#include <gssapi/gssapi.h>
```

OM_uint32

```
gss_wrap(OM_uint32 *minor_status, const gss_ctx_id_t context_handle, int conf_req_flag,  
         gss_qop_t qop_req, const gss_buffer_t input_message_buffer, int *conf_state,  
         gss_buffer_t output_message_buffer);
```

OM_uint32

```
gss_seal(OM_uint32 *minor_status, gss_ctx_id_t context_handle, int conf_req_flag, gss_qop_t qop_req,  
         gss_buffer_t input_message_buffer, int *conf_state, gss_buffer_t output_message_buffer);
```

DESCRIPTION

Attaches a cryptographic MIC and optionally encrypts the specified `input_message`. The `output_message` contains both the MIC and the message. The `qop_req` parameter allows a choice between several cryptographic algorithms, if supported by the chosen mechanism.

Since some application-level protocols may wish to use tokens emitted by `gss_wrap()` to provide "secure framing", implementations must support the wrapping of zero-length messages.

The `gss_seal()` routine is an obsolete variant of `gss_wrap()`. It is provided for backwards compatibility with applications using the GSS-API V1 interface. A distinct entrypoint (as opposed to `#define`) is provided, both to allow GSS-API V1 applications to link and to retain the slight parameter type differences between the obsolete versions of this routine and its current form.

PARAMETERS

<code>minor_status</code>	Mechanism specific status code.
<code>context_handle</code>	Identifies the context on which the message will be sent.
<code>conf_req_flag</code>	Non-zero Both confidentiality and integrity services are requested. Zero Only integrity service is requested.
<code>qop_req</code>	Specifies required quality of protection. A mechanism-specific default may be requested by setting <code>qop_req</code> to <code>GSS_C_QOP_DEFAULT</code> . If an unsupported protection strength is requested, <code>gss_wrap()</code> will return a <code>major_status</code> of

GSS_S_BAD_QOP.

`input_message_buffer` Message to be protected.

`conf_state`

Non-zero Confidentiality, data origin authentication and integrity services have been applied.

Zero Integrity and data origin services only has been applied.

`output_message_buffer` Buffer to receive protected message. Storage associated with this buffer must be freed by the application after use with a call to `gss_release_buffer(3)`.

RETURN VALUES

`GSS_S_COMPLETE` Successful completion.

`GSS_S_CONTEXT_EXPIRED` The context has already expired

`GSS_S_NO_CONTEXT` The `context_handle` parameter did not identify a valid context.

`GSS_S_BAD_QOP` The specified QOP is not supported by the mechanism.

SEE ALSO

`gss_release_buffer(3)`, `gss_unwrap(3)`

STANDARDS

RFC 2743 Generic Security Service Application Program Interface Version 2, Update 1

RFC 2744 Generic Security Service API Version 2 : C-bindings

HISTORY

The `gss_wrap` function first appeared in FreeBSD 7.0.

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