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libbase64 Overview

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PlayStation®Vita Programmer Tool Runtime Library Release 3.50

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1 Library Overview

Scope of This Document

This document provides an explanation of the libbase64 library, which carries out Base64 format data encoding and decoding. The procedure for encoding data in the Base64 format and the procedure for decoding data of the Base64 format are explained.

Purpose and Features

libbase64 is a library for carrying out Base64 format (defined by RFC 2045) data encoding and decoding. Although this library is referenced by libhttp when using Base/Digest authentication, it can be used on its own as well.

Main Features

The main feature offered by libbase64 is as follows:

- Base64 format encoding and decoding

Embedding into a Program

The files which are needed to use libbase64 are as follows.

Category	Filename
Header file	libbase64.h
Static link library file	libSceBase64.a

Include libbase64.h in the source program.

When building the program, link libSceBase64.a.

Reference Materials

For basic authentication and digest authentication supported by libhttp, refer to the following documents.

- libhttp Overview
- libhttp Reference

For the libnet, refer to the following documents.

- libnet Overview
- libnet Reference

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2 Using the Library

Basic Usage Procedure

When using libbase64, there is no particular initialization process required.

Encode Data to Base64 Format

A byte string can be encoded to the Base64 format as follows. Since memory is not allocated within libbase64, note that the application must have memory for output prepared in advance. The required memory size is [(input bytes +2) /3 * 4 +1] bytes.

```
unsigned char plain[SOURCE_LEN];
unsigned char *base64;
SceSize malloc_size;

malloc_size = (SOURCE_LEN + 2) / 3 * 4 + 1;      //Calculate output size
base64 = (unsigned char *)malloc(malloc_size);    //Allocate output memory
sceBase64Encoder(base64, plain, SOURCE_LEN);      //Encode
```

As shown above, encoding to the Base64 format is carried out by using the `sceBase64Encoder()` function.

Decoding Data of Base64 Format

A byte string encoded in the Base64 format can be decoded as follows. Since memory is not allocated within libbase64, note that the application must have memory for output prepared in advance. The required memory size is (input bytes /3 * 4 +1) bytes.

```
unsigned char base64[SOURCE_LEN];
unsigned char *plain;
SceSize malloc_size;

malloc_size = SOURCE_LEN / 4 * 3 + 1;             //Calculate output size
plain = (unsigned char *) malloc(malloc_size);    //Allocate output memory
sceBase64Decoder (plain, base64, SOURCE_LEN);     //Decode
```

As shown above, decoding of data in the Base64 format is carried out by using the `sceBase64Decoder()` function.

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