

# FunctionsRequest library API Reference

Add Chainlink to your project

If you need to integrate Chainlink into your project, install the [@chainlink/contracts NPM package](#).

- If you use [NPM](#): `npm install @chainlink/contracts --save`
- If you use [Yarn](#): `yarn add @chainlink/contracts`

Functions contracts are available starting from version 0.7.1.

Consumer contract developers use the [FunctionsRequest library](#) to build their [requests](#).

## [Types and Constants](#)

### [REQUEST\\_DATA\\_VERSION](#)

`uint16REQUEST_DATA_VERSION`

### [DEFAULT\\_BUFFER\\_SIZE](#)

`uint256DEFAULT_BUFFER_SIZE`

### [Location](#)

`enumLocation{Inline,Remote,DONHosted}` ValueDescriptionInlineProvided within the Request.RemoteHosted through a remote location that can be accessed through a provided URL.DONHostedHosted on the DON's storage.

### [CodeLanguage](#)

`enumCodeLanguage{JavaScript}`

### [Request](#)

`structRequest{enumFunctionsRequest.Location codeLocation;enumFunctionsRequest.Location secretsLocation;enumFunctionsRequest.CodeLanguage language;string source;bytes encryptedSecretsReference;string[] args;bytes[] bytesArgs;}`  
FieldTypeDescriptioncodeLocationLocationThe location of the source code that will be executed on each node in the DON.secretsLocationLocationThe location of secrets that will be passed into the source code. \*Only Remote secrets are supported.languageCodeLanguageThe coding language that the source code is written in.sourcestringRaw source code forRequest.codeLocationofLocation.Inline, URL forRequest.codeLocationofLocation.Remote, or slot decimal number forRequest.codeLocationofLocation.DONHosted.encryptedSecretsReferencebytesEncrypted URLs forRequest.secretsLocationofLocation.Remote, or CBOR encodedslotid+versionforRequest.secretsLocationofLocation.DONHosted.argsstring[]String arguments that will be passed into the source code.bytesArgsbytes[]Bytes arguments that will be passed into the source code.

## [Errors](#)

### [EmptySource](#)

`errorEmptySource()`

### [EmptySecrets](#)

`errorEmptySecrets()`

### [EmptyArgs](#)

`errorEmptyArgs()`

### [NoInlineSecrets](#)

`errorNoInlineSecrets()`

## [Functions](#)

## [\*\*encodeCBOR\*\*](#)

function encodeCBOR(struct FunctionsRequest.Request self) internal pure returns (bytes) Encodes a Request to CBOR encoded bytes

### [\*\*Parameters\*\*](#)

NameTypeDescriptionselfstruct FunctionsRequest.RequestThe request to encode

### [\*\*Return values\*\*](#)

NameTypeDescription[0]bytesCBOR encoded bytes

## [\*\*initializeRequest\*\*](#)

function initializeRequest(struct FunctionsRequest.Request self, enum FunctionsRequest.Location codeLocation, enum FunctionsRequest.CodeLanguage language, string source) internal pure Initializes a Chainlink Functions Request

Sets the codeLocation and code on the request

### [\*\*Parameters\*\*](#)

NameTypeDescriptionselfstruct FunctionsRequest.RequestThe uninitialized requestcodeLocationenum FunctionsRequest.LocationThe user provided source code locationlanguageenum FunctionsRequest.CodeLanguageThe programming language of the user codesourcestringThe user provided source code or a url

## [\*\*initializeRequestForInlineJavaScript\*\*](#)

function initializeRequestForInlineJavaScript(struct FunctionsRequest.Request self, string javascriptSource) internal pure Initializes a Chainlink Functions Request

Simplified version of initializeRequest for PoC

### [\*\*Parameters\*\*](#)

NameTypeDescriptionselfstruct FunctionsRequest.RequestThe uninitialized requestjavascriptSourcestringThe user provided JS code (must not be empty)

## [\*\*addSecretsReference\*\*](#)

function addSecretsReference(struct FunctionsRequest.Request self, bytes encryptedSecretsReference) internal pure Adds Remote user encrypted secrets to a Request

### [\*\*Parameters\*\*](#)

NameTypeDescriptionselfstruct FunctionsRequest.RequestThe initialized requestencryptedSecretsReferencebytesEncrypted comma-separated string of URLs pointing to offchain secrets

## [\*\*addDONHostedSecrets\*\*](#)

function addDONHostedSecrets(struct FunctionsRequest.Request self, uint8 slotID, uint64 version) internal pure Adds DON-hosted secrets reference to a Request

### [\*\*Parameters\*\*](#)

NameTypeDescriptionselfstruct FunctionsRequest.RequestThe initialized requestslotIDuint8Slot ID of the user's secrets hosted on DONversionuint64User data version (for the slotID)

## [\*\*setArgs\*\*](#)

function setArgs(struct FunctionsRequest.Request self, string[] args) internal pure Sets args for the user run function

### [\*\*Parameters\*\*](#)

NameTypeDescriptionselfstruct FunctionsRequest.RequestThe initialized requestargsstring[]The array of string args (must not be empty)

## setBytesArgs

function setBytesArgs(struct FunctionsRequest.Request self, bytes[] args) internal pure Sets bytes args for the user run function

### Parameters

Name	Type	Description
self	struct FunctionsRequest.Request	The initialized request
args	bytes[]	The array of bytes args (must not be empty)