

data center closest to the user, or in a region near your databases. This can result in a much lower latency and allows you to provide personalization at speed.

Edge Functions run *after* the cache and so are ideal to be used on specific, dynamic parts of your site once the page is loaded. This response can be cached on the Edge Network making future invocations even faster.

See the quickstart to learn how to create your first function with the Edge runtime.

Supported APIs

The Edge runtime provides a subset of Web APIs such as fetch, Request, and Response. This lightweight API layer is built to be performant and execute code with minimal latency.

The following tables list the APIs that are available in the Edge runtime.

Network APIs

API	Description
fetch	Fetches a resource
Request	Represents an HTTP request

Edge Runtime

Using WebAssembly

Logs

Limitations

Edge Middleware

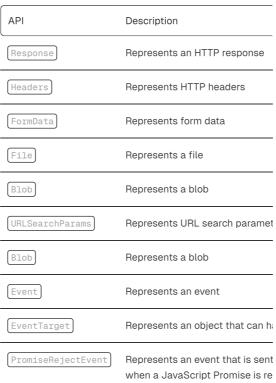
Data Cache

Cron Jobs

Image Optimization

Incremental Static Regeneration

Usage & Pricing



Encoding APIs

API	Description
TextEncoder	Encodes a string into a Uint8,
TextDecoder	Decodes a Uint8Array into a s
atob	Decodes a base-64 encoded
btoa	Encodes a string in base-64

Stream APIs

API	Description
ReadableStream	Represents a rea
WritableStream	Represents a wri
WritableStreamDefaultWriter	Represents a wri
TransformStream	Represents a trai
ReadableStreamDefaultReader	Represents a rea
ReadableStreamBYOBReader	Represents a rea

Crypto APIs

API	Description
crypto	Provides access to the cryptographic fu
SubtleCrypto	Provides access to common cryptograph signing, encryption or decryption
CryptoKey	Represents a cryptographic key

Other Web Standard APIs

API	Description
AbortController	Allows you to abort one or more desired
AbortSignal	Represents a signal object that a with a DOM request (such as a required
DOMException	Represents an error that occurs
structuredClone	Creates a deep copy of a value
URLPattern	Represents a URL pattern
Array	Represents an array of values
ArrayBuffer	Represents a generic, fixed-leng
Atomics	Provides atomic operations as si
BigInt	Represents a whole number with
BigInt64Array	Represents a typed array of 64-
BigUint64Array	Represents a typed array of 64-
Boolean	Represents a logical entity and cand false
clearInterval	Cancels a timed, repeating action established by a call to setInterest
clearTimeout	Cancels a timed, repeating action established by a call to setTime
console	Provides access to the browser's
DataView	Represents a generic view of an
Date	Represents a single moment in t format
decodeURI	Decodes a Uniform Resource Ide created by encodeURI or by a s

	Edge Runtime
API	Description
	routine
encodeURI	Encodes a Uniform Resource Ide instance of certain characters by escape sequences representing character
encodeURIComponent	Encodes a Uniform Resource Ide replacing each instance of certa three, or four escape sequences encoding of the character
Error	Represents an error when trying accessing a property
EvalError	Represents an error that occurs eval()
Float32Array	Represents a typed array of 32-
Float64Array	Represents a typed array of 64-
Function	Represents a function
Infinity	Represents the mathematical In
[Int8Array]	Represents a typed array of 8-bi
[Int16Array]	Represents a typed array of 16-b
Int32Array	Represents a typed array of 32-
Intl	Provides access to international functionality
isFinite	Determines whether a value is a
isNaN	Determines whether a value is
JSON	Provides functionality to convert from the JSON format
Map	Represents a collection of value only once
Math	Provides access to mathematica
Number	Represents a numeric value
Object	Represents the object that is the objects
parseFloat	Parses a string argument and re
parseInt	Parses a string argument and re specified radix
Promise	Represents the eventual comple asynchronous operation, and its

	Edge Runtime
API	Description
Proxy	Represents an object that is use for fundamental operations (e.g. enumeration, function invocation
RangeError	Represents an error when a valu
ReferenceError	Represents an error when a non- referenced
Reflect	Provides methods for intercepta
RegExp	Represents a regular expression combinations of characters
Set	Represents a collection of value only once
setInterval	Repeatedly calls a function, with each call
setTimeout	Calls a function or evaluates an number of milliseconds
SharedArrayBuffer	Represents a generic, fixed-leng
String	Represents a sequence of chara
Symbol	Represents a unique and immuta
SyntaxError	Represents an error when trying invalid code
TypeError	Represents an error when a valu
Uint8Array	Represents a typed array of 8-bi
(Uint8ClampedArray)	Represents a typed array of 8-bit to 0-255
Uint32Array	Represents a typed array of 32-
URIETTOT	Represents an error when a globused in a wrong way
URL	Represents an object providing screating object URLs
URLSearchParams	Represents a collection of key/v
(WeakMap)	Represents a collection of key/v are weakly referenced
WeakSet	Represents a collection of object occur only once
WebAssembly	Provides access to WebAssemb

Check if you're running on the Edge runtime

You can check if your function is running on the Edge runtime by checking the global globalThis.EdgeRuntime property. This can be helpful if you need to validate that your function is running on the Edge runtime in tests, or if you need to use a different API depending on the runtime.

```
if (typeof EdgeRuntime !== 'string') {
    // dead-code elimination is enabled
}
```

Compatible Node.js modules

The following modules can be imported with and without the mode: prefix when using the import statement:

Module	Description
async_hooks	Manage asynchronous resources lifecyc Supports the WinterCG subset of APIs
events	Facilitate event-driven programming with listeners. This API is fully supported
buffer	Efficiently manipulate binary data using 1 allocations with (Buffer). Every primitive Uint8Array accepts (Buffer) too
assert	Provide a set of assertion functions for v
util	Offer various utility functions where we i

Also, Buffer is globally exposed to maximize compatibility with existing Node.js modules.

Unsupported APIs

The Edge runtime has some restrictions including:

- Some Node.js APIs other than the ones listed above are not supported. For example, you can't read or write to the filesystem
- node_modules can be used, as long as they

10/17/24, 8:51 AM

Edge Runtime

- Calling require directly is **not allowed**. Use import instead

The following JavaScript language features are disabled, and will not work:

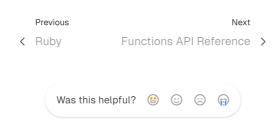


While WebAssembly.instantiate is supported in Edge Runtime, it requires the Wasm source code to be provided using the import statement. This means you cannot use a buffer or byte array to dynamically compile the module at runtime.

Environment Variables

You can use process env to access Environment Variables.

Last updated on July 16, 2024



Products Resources
AI Community

Enterprise

Edge Runtime

Observability Guides

Previews Help

Rendering Integrations

Security Pricing Turbo Resources

Templates

Company Social

About GitHub

Blog in LinkedIn

Careers X Twitter

Changelog YouTube Contact Us Customers

Partners Privacy Policy

Legal ~

All systems normal