

# CAPH.DAL.LOCALSTORAGECACHE

LocalStorageCache is a class that provides caching functions. It uses HTML5 Local Storage. Main APIs of LocalStorageCache are 'find', 'insertBlob', 'insertBinary', 'insertText', 'get' and 'remove.' Using find method, a user can find an item with a key, which is usually a URL. Using insertBlob method, a user can insert a Blob into the cache. Using insertBinary method, a user can insert binary into the cache. Using insertText method, a user can insert text into the cache. Using get method, a user can get cached data. Using remove method, a user can remove a cache entry.

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## Constructor

LocalStorageCache	
Description	
Construct a LocalStorageCache	
Emulator Support	Y
SDK Constraint	None

Example
<pre>var LocalStorageCache = caph.dal.LocalStorageCache; var localstoragecache = new LocalStorageCache();</pre>

## Methods

### encodeUint8ArrayToBase64

#### Description

Encode a Uint8 TypedArray to a base64 string

Parameters	<ul style="list-style-type: none"> <li>■input <ul style="list-style-type: none"> <li>- Uint8 TypedArray</li> <li>- A Uint8 TypedArray as an input.</li> <li>- [default : null]</li> </ul> </li> </ul>
Return	<ul style="list-style-type: none"> <li>■String <ul style="list-style-type: none"> <li>- A base64-encoded string</li> </ul> </li> </ul>
Emulator Support	Y
SDK Constraint	none

#### Example

```
var BaseCache = caph.dal.BaseCache;
var basecache = new BaseCache();

// Let's say data -- binary is given
var uint8Array = new Uint8Array(binary);
var binaryData = basecache.encodeUint8ArrayToBase64(uint8Array);
```

### queryMetadata

#### Description

Query metadata

Parameters	<ul style="list-style-type: none"> <li>■url <ul style="list-style-type: none"> <li>- String</li> <li>- url The key, URL</li> <li>- default : null</li> </ul> </li> </ul>
Return	<ul style="list-style-type: none"> <li>■Object <ul style="list-style-type: none"> <li>- Metadata for the given URL.</li> </ul> </li> </ul>
Emulator Support	Y
SDK Constraint	none

#### Example

```
var LocalStorageCache = caph.dal.LocalStorageCache;
var localstoragecache = new LocalStorageCache

var url = 'http://www.foo.com';

var metadata = queryMetadata(url);
```

### LocalStorageCache

#### Description

(Constructor) Construct a LocalStorageCache

Parameters	<ul style="list-style-type: none"> <li>■Void</li> </ul>
Return	<ul style="list-style-type: none"> <li>■LocalStorageCache <ul style="list-style-type: none"> <li>- Instance of LocalStorageCache</li> </ul> </li> </ul>

Emulator Support	Y
SDK Constraint	none
Example	
<pre>var LocalStorageCache = caph.dal.LocalStorageCache; var localstoragecache = new LocalStorageCache();</pre>	
<b>remove</b>	
Description	
Remove an item	
Parameters	<div> <div>■url</div> <div>- String</div> <div>- the key. URL</div> </div>
Return	<div> <div>■Void</div> </div>
Emulator Support	Y
SDK Constraint	none
Example	
<pre>var LocalStorageCache = caph.dal.LocalStorageCache; var localstoragecache = new LocalStorageCache();  // Let's say parameter - url is given var removeFileName = localstoragecache.find(url); localstoragecache.remove(removeFileName, function(){} , function (){} );</pre>	
<b>setBase64Proxy</b>	
Description	
Set the Base64Encoder Proxy	
Parameters	<div> <div>■proxy</div> <div>- Object</div> <div>- default value : null</div> <div>- A Base64Encoder Proxy</div> </div>
Return	<div> <div>■Void</div> </div>
Emulator Support	Y
SDK Constraint	none
Example	
<pre>var LocalStorageCache = caph.dal.LocalStorageCache; var localstoragecache = new LocalStorageCache();  // Let's say the proxy is already given.  localstoragecache.setBase64Proxy(proxy);</pre>	
<b>insertBinary</b>	
Description	
Insert item into localstorage as binary type	

Parameters	<ul style="list-style-type: none"> <li>■options <ul style="list-style-type: none"> <li>- Object</li> <li>* url : the key</li> <li>* URL; blob : blob</li> <li>* size : the size of the encoded blob</li> </ul> </li> <li>■onSuccessCallback (Optional) <ul style="list-style-type: none"> <li>- Function</li> <li>- callback on success.</li> </ul> </li> <li>■onFailureCallback (Optional) <ul style="list-style-type: none"> <li>- Function</li> <li>- callback on failure.</li> </ul> </li> </ul>
Return	■Void
Emulator Support	Y
SDK Constraint	none

#### Example

```
var LocalStorageCache = caph.dal.LocalStorageCache;
var localstoragecache = new LocalStorageCache();

function onSuccessCallback() {
    console.log("insertBinary success");
}
function onFailureCallback() {
    console.log("insertBinary failure");
}

// Let's say data -- url, binaryData, and size are given
var options = {};
options.url = url;
options.binary = binaryData;
options.size = size;
localstoragecache.insertBinary(options, onSuccessCallback, onFailureCallback);
```

## insertBlob

#### Description

Insert item into localstorage as blob type

Parameters	<ul style="list-style-type: none"> <li>■options <ul style="list-style-type: none"> <li>- Object</li> <li>* url : the key</li> <li>* URL; blob : blob</li> <li>* size : the size of the encoded blob</li> </ul> </li> <li>■onSuccessCallback (Optional) <ul style="list-style-type: none"> <li>- Function</li> <li>- callback on success.</li> </ul> </li> <li>■onFailureCallback (Optional) <ul style="list-style-type: none"> <li>- Function</li> <li>- callback on failure.</li> </ul> </li> </ul>
Return	<ul style="list-style-type: none"> <li>■Boolean</li> <li>- false, if fails; undefined, otherwise</li> </ul>
Emulator Support	Y
SDK Constraint	none

#### Example

```
var LocalStorageCache = caph.dal.LocalStorageCache;
var localstoragecache = new LocalStorageCache();

function onSuccessCallback() {
    console.log("insertBlob success");
}
function onFailureCallback() {
    console.log("insertBlob failure");
}

// Let's say data -- url, blobData, and size are given
var options = {};
options.url = url;
options.blob = blobData;
options.size = size;
localstoragecache.insertBlob(options, onSuccessCallback, onFailureCallback);
```

## insertText

Description

Insert item into localstorage as text type

Parameters	<div>■options</div> <div>- Object</div> <div>* url : the key</div> <div>* URL; blob : blob</div> <div>* size : the size of the encoded blob</div> <div>■onSuccessCallback (Optional)</div> <div>- Function</div> <div>- callback on success.</div> <div>■onFailureCallback (Optional)</div> <div>- Function</div> <div>- callback on failure.</div>
Return	■Void
Emulator Support	Y
SDK Constraint	none

Example

```
var LocalStorageCache = caph.dal.LocalStorageCache;
var localstoragecache = new LocalStorageCache();

function onSuccessCallback() {
    console.log("insertText success");
}
function onFailureCallback() {
    console.log("insertText failure");
}

// Let's say data -- url, text, and size are given
var options = {};
options.url = url;
options.text = text;
options.size = size;
localstoragecache.insertText(options, onSuccessCallback, onFailureCallback);
```

## find

Description

Find an item

Parameters	<div>■url</div> <div>- String</div> <div>- the key. URL</div>
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Return	<ul style="list-style-type: none"> <li>■ Boolean</li> <li>- true, if it is found; false, otherwise</li> </ul>
Emulator Support	Y
SDK Constraint	none
Example	
<pre> var LocalStorageCache = caph.dal.LocalStorageCache; var localstoragecache = new LocalStorageCache();  function successCallback () {     console.log("insertBlob success"); } function failureCallback() {     console.log("insertBlob failure"); } // Let's say data -- url, blobData, and size are given var option = {}; options.url = url; options.blob = blobData; options.size = size; localstoragecache.insertBlob(options, successCallback failureCallback);  var fileURL = option.url; var result = localstorage.find(fileURL);           //return true </pre>	
<b>clearAll</b>	
Description	
Clear all key/value pairs in the LocalStorageCache	
Parameters	<ul style="list-style-type: none"> <li>■ Void</li> </ul>
Return	<ul style="list-style-type: none"> <li>■ Void</li> </ul>
Emulator Support	Y
SDK Constraint	none
Example	
<pre> var LocalStorageCache = caph.dal.LocalStorageCache; var localstoragecache = new LocalStorageCache();  localstoragecache.clearAll(); </pre>	
<b>init</b>	
Description	
Initialize LocalStorageCache for caching	
Parameters	<ul style="list-style-type: none"> <li>■ prefix <ul style="list-style-type: none"> <li>- String</li> <li>- prefix must be given.</li> </ul> </li> <li>■ sizeLimitInBytes <ul style="list-style-type: none"> <li>- Number</li> <li>- Size limit in bytes, localstoragecache's limit.</li> </ul> </li> <li>■ successCallback (Optional) <ul style="list-style-type: none"> <li>- function</li> <li>- this callback will be executed after initialize      localstorage</li> </ul> </li> <li>■ failureCallback (Optional) <ul style="list-style-type: none"> <li>- function</li> <li>- Callback on failure</li> </ul> </li> </ul>
Return	<ul style="list-style-type: none"> <li>■ Boolean</li> <li>- false, if fails; undefined, otherwise</li> </ul>
Emulator Support	Y

SDK Constraint	none
Example	
<pre>var LocalStorageCache = caph.dal.LocalStorageCache; var localstoragecache = new LocalStorageCache();  localstoragecache.init("localstoragecache", 1024*1024*5/2, function() {     console.log("success initializing localstoragecache"); });</pre>	
<b>storeMeta</b>	
Description	
Store metadata to a LocalStorage	
Parameters	■Void
Return	■Void
Emulator Support	Y
SDK Constraint	none
Example	
<pre>var LocalStorageCache = caph.dal.LocalStorageCache; var localstoragecache = new LocalStorageCache();  localstoragecache.storeMeta();</pre>	
<b>doLRU</b>	
Description	
Remove some entries by using LRU algorithm	
Parameters	■size <ul style="list-style-type: none"> <li>- Number</li> <li>- A target size</li> <li>- [default : null]</li> </ul>
Return	■Void
Emulator Support	Y
SDK Constraint	none
Example	
<pre>var LocalStorageCache = caph.dal.LocalStorageCache; var localstoragecache = new LocalStorageCache();  localstoragecahe.doLRU(2 * 1024 * 1024);</pre>	
<b>getItemCount</b>	
Description	
Returns item count	
Parameters	■Void
Return	■Number <ul style="list-style-type: none"> <li>- Number of Items</li> </ul>
Emulator Support	Y
SDK Constraint	none
Example	

```
var LocalStorageCache = caph.dal.LocalStorageCache;  
var localstoragecache = new LocalStorageCache();  
  
var count = localstoragecache.getItemCount();
```

## get

Description

Get the item. It is searched by given parameter, url

Parameters	■url - String - the key. URL
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Return	■Object - Object to return
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Emulator Support	Y
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SDK Constraint	none
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Example

```
var LocalStorageCache = caph.dal.LocalStorageCache;  
var localstoragecache = new LocalStorageCache();  
  
var item = localstoragecache.get(fileName);  
var img = document.createElement('img');  
img.src = item;  
document.body.appendChild(img);
```

## buildItemKey

Description

Make a key for an item

Parameters	■key - String - A unique key of an item - [default : null]
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Return	■String - A key for an item
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Emulator Support	Y
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SDK Constraint	none
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Example

```
var LocalStorageCache = caph.dal.LocalStorageCache;  
var localstoragecache = new LocalStorageCache();  
  
var keyString = localstoragecache.buildItemKey('http://www.foo.com');
```

## buildMetaKey

Description

Build a key for the metadata record

Parameters	■Void
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Return	■String - A key string for the metadata record
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Emulator Support	Y
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SDK Constraint	none
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Example	
<pre>var LocalStorageCache = caph.dal.LocalStorageCache; var localstoragecache = new LocalStorageCache();  var keyString = localstoragecache.buildMetaKey();</pre>	
<b>buildJSONFromMeta</b>	
Description	
Build a JSON string From Metadata	
Parameters	<ul style="list-style-type: none"> <li>■meta <ul style="list-style-type: none"> <li>- Object</li> <li>- A metadata</li> <li>- [default : null]</li> </ul> </li> </ul>
Return	<ul style="list-style-type: none"> <li>■String <ul style="list-style-type: none"> <li>- A JSON string represents a metadata item</li> </ul> </li> </ul>
Emulator Support	Y
SDK Constraint	none
Example	
<pre>var LocalStorageCache = caph.dal.LocalStorageCache; var localstoragecache = new LocalStorageCache();  var meta = {}; meta._metaArray = []; meta._metaArray.push('foo'); var jsonString = localstoragecache.buildJSONFromMeta(meta);</pre>	
<b>buildMetaFromJSON</b>	
Description	
Build Metadata From a JSON string	
Parameters	<ul style="list-style-type: none"> <li>■meta <ul style="list-style-type: none"> <li>- Object</li> <li>- A metadata</li> <li>- [default : null]</li> </ul> </li> <li>■json <ul style="list-style-type: none"> <li>- String</li> <li>- A JSON for metadata</li> <li>- [default : null]</li> </ul> </li> </ul>
Return	<ul style="list-style-type: none"> <li>■Void</li> </ul>
Emulator Support	Y
SDK Constraint	none
Example	
<pre>var LocalStorageCache = caph.dal.LocalStorageCache; var localstoragecache = new LocalStorageCache();  var meta = {}; meta._metaArray = []; var json = ['foo']; localstoragecache.buildMetaFromJSON(meta, json);</pre>	
<b>getTotalSize</b>	
Description	
Get the total item byte size	

Parameters	■Void
Return	■Number - Total Item Byte Size of the LocalStorageCache
Emulator Support	Y
SDK Constraint	none
Example	
<pre> var LocalStorageCache = caph.dal.LocalStorageCache; var localstoragecache = new LocalStorageCache();  var totalSize = localstoragecache.getTotalSize(); </pre>	