 carlosvillademor fix: add null checks before removing parent refs ... History

5 contributors     

366 lines (327 sloc) | 11.6 KB ...

```
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*/

/*
 * A library that enables the hooking of the standard 'require' function, such
```

```
 * that a (possibly partial) mock implementation can be provided instead. This
 * is most useful for running unit tests, since any dependency obtained through
 * 'require' can be mocked out.
 */

"use strict";

var m = require('module'),
    registeredMocks = {},
    registeredSubstitutes = {},
    registeredAllowables = {},
    originalLoader = null,
    originalCache = null,
    defaultOptions = {
        useCleanCache: false,
        warnOnReplace: true,
        warnOnUnregistered: true
    },
    options = {};

/*
 * Merge the supplied options in with a new copy of the default options to get
 * the effective options, and return those.
 */
function getEffectiveOptions(opts) {
    var options = {};

    Object.keys(defaultOptions).forEach(function (key) {
        options[key] = defaultOptions[key];
    });
    if (opts) {
        Object.keys(opts).forEach(function (key) {
            options[key] = opts[key];
        });
    }
    return options;
}

/*
 * The (private) loader replacement that is used when hooking is enabled. It
 * does the work of returning a mock or substitute when configured, reporting
 * non-allowed modules, and invoking the original loader when appropriate.
 * The signature of this function *must* match that of Node's Module._load,
 * since it will replace that when mockery is enabled.
 */
function hookedLoader(request, parent, isMain) {
    var subst, allow, file;

    if (!originalLoader) {
```

```
79          throw new Error("Loader has not been hooked");
80      }
81
82      if (registeredMocks.hasOwnProperty(request)) {
83          return registeredMocks[request];
84      }
85
86      if (registeredSubstitutes.hasOwnProperty(request)) {
87          subst = registeredSubstitutes[request];
88          if (!subst.module && subst.name) {
89              subst.module = originalLoader(subst.name, parent, isMain);
90          }
91          if (!subst.module) {
92              throw new Error("Misconfigured substitute for '" + request + "'");
93          }
94          return subst.module;
95      }
96
97      if (registeredAllowables.hasOwnProperty(request)) {
98          allow = registeredAllowables[request];
99          if (allow.unhook) {
100             file = m._resolveFilename(request, parent);
101             if ((file.indexOf('/') !== -1 || file.indexOf('\\') !== -1) && allow.paths.indexOf(fil
102                 allow.paths.push(file);
103             }
104         }
105     } else {
106         if (options.warnOnUnregistered) {
107             console.warn("WARNING: loading non-allowed module: " + request);
108         }
109     }
110
111     return originalLoader(request, parent, isMain);
112 }
113
114 /*
115  * Enables mockery by hooking subsequent 'require' invocations. Note that *all*
116  * 'require' invocations will be hooked until 'disable' is called. Calling this
117  * function more than once will have no ill effects.
118  */
119 function enable(opts) {
120     if (originalLoader) {
121         // Already hooked
122         return;
123     }
124
125     options = getEffectiveOptions(opts);
126
127     if (options.useCleanCache) {
```

```
        originalCache = m._cache;
        m._cache = {};
        repopulateNative();
    }

    originalLoader = m._load;
    m._load = hookedLoader;
}

/*
 * Disables mockery by unhooking from the Node loader. No subsequent 'require'
 * invocations will be seen by mockery. Calling this function more than once
 * will have no ill effects.
 */
function disable() {
    if (!originalLoader) {
        // Not hooked
        return;
    }

    if (options.useCleanCache) {
        // Previously this just set m._cache to originalCache. This would make
        // node re-require native addons that were required while mockery was
        // enabled, which breaks it in node@>=0.12. Instead populate
        // originalCache with any native addons that were first required since
        // mockery was enabled.
        Object.keys(m._cache).forEach(function(k){
            if (k.indexOf('\.node') > -1 && !originalCache[k]) {
                originalCache[k] = m._cache[k];
            }
        });
        removeParentReferences();
        m._cache = originalCache;
        originalCache = null;
    }

    m._load = originalLoader;
    originalLoader = null;
}

 /*
 * If the clean cache option is in effect, reset the module cache to an empty
 * state. Calling this function when the clean cache option is not in effect
 * will have no ill effects, but will do nothing.
 */
function resetCache() {
    if (options.useCleanCache && originalCache) {
        removeParentReferences();
        m._cache = {};
```

```
        repopulateNative();
    }
}

/*
 * Starting in node 0.12 node won't reload native modules
 * The reason is that native modules can register themselves to be loaded automatically
 * This will re-populate the cache with the native modules that have not been mocked
 */
function repopulateNative() {
  Object.keys(originalCache).forEach(function(k) {
      if (k.indexOf('\.node') > -1 && !m._cache[k]) {
          m._cache[k] = originalCache[k];
      }
  });
}

/*
 * Enable or disable warnings to the console when previously registered mocks
 * and subsitutes are replaced.
 */
function warnOnReplace(enable) {
    options.warnOnReplace = enable;
}

/*
 * Enable or disable warnings to the console when modules are loaded that have
 * not been registered as a mock, a substitute, or allowed.
 */
function warnOnUnregistered(enable) {
    options.warnOnUnregistered = enable;
}

/*
 * Register a mock object for the specified module. While mockery is enabled,
 * any subsequent 'require' for this module will return the mock object. The
 * mock need not mock out all original exports, but no fallback is provided
 * for anything not mocked and subsequently invoked.
 */
function registerMock(mod, mock) {
    if (options.warnOnReplace && registeredMocks.hasOwnProperty(mod)) {
        console.warn("WARNING: Replacing existing mock for module: " + mod);
    }
    registeredMocks[mod] = mock;
}

/*
 * Deregister a mock object for the specified module. A subsequent 'require' for
 * that module will revert to the previous behaviour (which, by default, means
```

```
 * falling back to the original 'require' behaviour).
 */
function deregisterMock(mod) {
    if (registeredMocks.hasOwnProperty(mod)) {
        delete registeredMocks[mod];
    }
}

/*
 * Register a substitute module for the specified module. While mockery is
 * enabled, any subsequent 'require' for this module will be effectively
 * replaced by a 'require' for the substitute module. This is useful when
 * a mock implementation is itself implemented as a module.
 */
function registerSubstitute(mod, subst) {
    if (options.warnOnReplace && registeredSubstitutes.hasOwnProperty(mod)) {
        console.warn("WARNING: Replacing existing substitute for module: " + mod);
    }
    registeredSubstitutes[mod] = {
        name: subst
    };
}

/*
 * Deregister a substitute module for the specified module. A subsequent
 * 'require' for that module will revert to the previous behaviour (which, by
 * default, means falling back to the original 'require' behaviour).
 */
function deregisterSubstitute(mod) {
    if (registeredSubstitutes.hasOwnProperty(mod)) {
        delete registeredSubstitutes[mod];
    }
}

/*
 * Register a module as 'allowed', meaning that, even if a mock or substitute
 * for it has not been registered, mockery will not complain when it is loaded
 * via 'require'. This encourages the user to consciously declare the modules
 * that will be loaded and used in the original form, thus avoiding warnings.
 *
 * If 'unhook' is true, the module will be removed from the module cache when
 * it is deregistered.
 */
function registerAllowable(mod, unhook) {
    registeredAllowables[mod] = {
        unhook: !!unhook,
        paths: []
    };
}
```

```
275
276 /*
277  * Register an array of modules as 'allowed'. This is a convenience function
278  * that performs the same function as 'registerAllowable' but for an array of
279  * modules rather than a single module.
280  */
281 function registerAllowables(mods, unhook) {
282     mods.forEach(function (mod) {
283         registerAllowable(mod, unhook);
284     });
285 }
286
287 /*
288  * Deregister a module as 'allowed'. A subsequent 'require' for that module
289  * will generate a warning that the module is not allowed, unless or until a
290  * mock or substitute is registered for that module.
291  */
292 function deregisterAllowable(mod) {
293     if (registeredAllowables.hasOwnProperty(mod)) {
294         var allow = registeredAllowables[mod];
295         if (allow.unhook) {
296             allow.paths.forEach(function (p) {
297                 delete m._cache[p];
298             });
299         }
300         delete registeredAllowables[mod];
301     }
302 }
303
304 /*
305  * Deregister an array of modules as 'allowed'. This is a convenience function
306  * that performs the same function as 'deregisterAllowable' but for an array of
307  * modules rather than a single module.
308  */
309 function deregisterAllowables(mods) {
310     mods.forEach(function (mod) {
311         deregisterAllowable(mod);
312     });
313 }
314
315 /*
316  * Deregister all mocks, substitutes, and allowed modules, resetting the state
317  * to a clean slate. This does not affect the enabled / disabled state of
318  * mockery, though.
319  */
320 function deregisterAll() {
321     Object.keys(registeredAllowables).forEach(function (mod) {
322         var allow = registeredAllowables[mod];
323         if (allow.unhook) {
```

```
            allow.paths.forEach(function (p) {
                delete m._cache[p];
            });
        }
    });

    registeredMocks = {};
    registeredSubstitutes = {};
    registeredAllowables = {};
}

/**
 * Remove references to modules in the mockery cache from
 * their parents' children.
 */
function removeParentReferences() {
    Object.keys(m._cache).forEach(function(k){
        if (k.indexOf('\.node') === -1) {
            // don't touch native modules, because they're special
            var mod = m._cache[k];
            var idx = mod.parent && mod.parent.children && mod.parent.children.indexOf(mod);
            if (idx > -1) {
                mod.parent.children.splice(idx, 1);
            }
        }
    });
}

// Exported functions
exports.enable = enable;
exports.disable = disable;
exports.resetCache = resetCache;
exports.warnOnReplace = warnOnReplace;
exports.warnOnUnregistered = warnOnUnregistered;
exports.registerMock = registerMock;
exports.registerSubstitute = registerSubstitute;
exports.registerAllowable = registerAllowable;
exports.registerAllowables = registerAllowables;
exports.deregisterMock = deregisterMock;
exports.deregisterSubstitute = deregisterSubstitute;
exports.deregisterAllowable = deregisterAllowable;
exports.deregisterAllowables = deregisterAllowables;
exports.deregisterAll = deregisterAll;
```