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| . ra.rutoken.ru |  
-----
```

...



```
<!DOCTYPE html>  
<html>  
<head>  
<meta charset="UTF-8">  
  
<script type="text/javascript" src="rutoken.js"></script>  
<script type="text/javascript" src="scripts.js"></script>  
  
<title>Rutoken Plugin Tutorial</title>  
</head>  
<body>  
<pre>  
-----  
| |  
| . <a href="http://ra.rutoken.ru"> ra.rutoken.ru</a>  
| |  
-----  
</pre>  
<div id="pluginStatus"><pre> ...</pre></div>  
<textarea rows="10" cols="95" id="textToSign" placeholder=" " ></textarea><br/>  
<button id="signButton" onclick="sign()" style="display: block; background: none; border: 4px solid black; font-  
family: monospace; width: 20em; height: 3em; text-align: center; cursor: pointer;"> </button>  
</body>  
</html>
```

```
// GOOGLE CHROME  
//  
// - .  
// :  
// promise.then(onFulfilled, onRejected)  
// onFulfilled - ,  
// onRejected - ,  
//  
//  
// " "  
var plugin;  
  
function checkVersion(lastVersion) {  
  if (plugin.version.toString() < lastVersion)  
    console.log("download last version: " + lastVersion);  
  else  
    console.log("you have last version");  
}  
  
function getLastRtPluginVersion(callback) {  
  var xhr = new XMLHttpRequest();  
  xhr.open('GET', 'https://download.rutoken.ru/Rutoken_Plugin/Current/version.txt', true);  
  xhr.onreadystatechange = function() {  
    if (xhr.readyState == 4 && xhr.status == 200) {  
      var lastPluginVersion = this.response.split('Version: v.')[1].split('Release')[0].replace(/s+/g, '');  
      callback(lastPluginVersion);  
    }  
  };  
  xhr.send();  
}
```

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}

window.onload = function() {
rutoken.ready
// ' ' Google Chrome
.then(function() {
if (window.chrome || typeof InstallTrigger !== 'undefined') {
return rutoken.isExtensionInstalled();
} else {
return Promise.resolve(true);
}
})
//
.then(function(result) {
if (result) {
return rutoken.isPluginInstalled();
} else {
return Promise.reject(" ' ');
}
})
//
.then(function(result) {
if (result) {
return rutoken.loadPlugin();
} else {
return Promise.reject(" ");
}
})
//
.then(function(result) {
if (!result) {
return Promise.reject(" ");
} else {
plugin = result;
return Promise.resolve();
}
})
.then(function() {
document.getElementById("pluginStatus").innerHTML = "<pre> </pre>";
getLastRtPluginVersion(checkVersion);
}, function(msg) {
document.getElementById("pluginStatus").innerHTML = "<pre>" + msg + "</pre>";
});
}

//
// https://dev.rutoken.ru/display/PUB/RutokenPluginDoc
// CLASS: ERRORCODES
function handleError(reason) {
if (isNaN(reason.message)) {
alert(reason);
} else {
var errorCodes = plugin.errorCodes;
switch (parseInt(reason.message)) {
case errorCodes.PIN_INCORRECT:
alert(" PIN");
break;
default:
alert(" ");
}
}
}

var rutokenHandle, certHandle;
sign = function() {
//
var textToSign = document.getElementById("textToSign").value;
if (textToSign.length == 0) {
alert(" ");
return;
}
//
plugin.enumerateDevices()
.then(function(devices) {
if (devices.length > 0) {
return Promise.resolve(devices[0]);
} else {
return Promise.reject(" ");
}
})
//
.then(function(firstDevice) {
rutokenHandle = firstDevice;
return plugin.getDeviceInfo(rutokenHandle, plugin.TOKEN_INFO_IS_LOGGED_IN);
});
}

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    })
    //      PIN-
    .then(function(isLoggedIn) {
    if (isLoggedIn) {
    return Promise.resolve();
    } else {
    return plugin.login(rutokenHandle, "12345678");
    }
    })
    //
    .then(function() {
    return plugin.enumerateCertificates(rutokenHandle, plugin.CERT_CATEGORY_USER);
    })
    //
    .then(function(certs) {
    if (certs.length > 0) {
    certHandle = certs[0];
    var options = {};
    return plugin.sign(rutokenHandle, certHandle, textToSign, plugin.DATA_FORMAT_PLAIN, options);
    } else {
    return Promise.reject(" ");
    }
    })
    //      CMS
    .then(function(cms) {
    alert(cms);
    })
    //
    .then(function() {
    plugin.logout(rutokenHandle);
    }, handleError);
    }
}

var rutoken = (function (my) {
    var loadCallbacks = [];
    var pluginMimeType = "application/x-rutoken-pki";
    var extension = window["C3B7563B-BF85-45B7-88FC-7CFF1BD3C2DB"];

    function isFunction (obj) {
        return !(obj && obj.call && obj.apply);
    }

    function proxyMember (target, member) {
        if (isFunction(target[member])) {
            return function () {
                return target[member].apply(target, arguments);
            };
        } else {
            return target[member];
        }
    }

    function returnPromise (promise) {
        return function () {
            return promise;
        };
    }

    function initialize () {
        my.ready = Promise.resolve(true);
        my.isExtensionInstalled = returnPromise(Promise.resolve(false));
        my.isPluginInstalled = returnPromise(Promise.resolve(true));
        my.loadPlugin = loadPlugin;
        window.rutokenLoaded = onPluginLoaded;
    }

    function initializeExtension() {
        var readyPromise = extension.initialize().then(function () {
            return extension.isPluginInstalled();
        }).then(function (result) {
            my.isExtensionInstalled = returnPromise(Promise.resolve(true));
            my.isPluginInstalled = proxyMember(extension, "isPluginInstalled");
        });
    }

    if (result) {
        pluginMimeType = "application/x-rutoken-plugin";
        my.loadPlugin = loadChromePlugin;
    }

    return true;
    });

my.ready = readyPromise;
}

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function initializeWithoutPlugin () {
  my.ready = Promise.resolve(true);
  my.isExtensionInstalled = returnPromise(Promise.resolve(false));
  my.isPluginInstalled = returnPromise(Promise.resolve(false));
}

function loadPlugin () {
  var obj = document.createElement("object");
  obj.style.setProperty("visibility", "hidden", "important");
  obj.style.setProperty("width", "0px", "important");
  obj.style.setProperty("height", "0px", "important");
  obj.style.setProperty("margin", "0px", "important");
  obj.style.setProperty("padding", "0px", "important");
  obj.style.setProperty("border-style", "none", "important");
  obj.style.setProperty("border-width", "0px", "important");
  obj.style.setProperty("max-width", "0px", "important");
  obj.style.setProperty("max-height", "0px", "important");

  // onload callback must be set before type attribute in IE earlier than 11.
  obj.innerHTML = "<param name='onload' value='rutokenLoaded'/>";
  // Just after setting type attribute before function returns promise
  // FireBreath uses onload callback to execute it with a small delay.
  // So it must be valid, but it will be called a little bit later.
  // In other browsers plugin will be initialized only after appending
  // an element to the document.
  obj.setAttribute("type", pluginMimeType);

  document.body.appendChild(obj);

  var promise = new Promise(function (resolve, reject) {
    loadCallbacks.push(resolve);
  });

  return promise;
}

function loadChromePlugin () {
  return extension.loadPlugin().then(function (plugin) {
    return resolveObject(plugin);
  }).then(function (resolvedPlugin) {
    resolvedPlugin.wrapWithOldInterface = wrapNewPluginWithOldInterface;
    return resolvedPlugin;
  });
}

function onPluginLoaded (plugin, error) {
  wrapOldPluginWithNewInterface(plugin).then(function (wrappedPlugin) {
    if (loadCallbacks.length == 0) {
      throw "Internal error";
    }
  })

  var callback = loadCallbacks.shift();
  callback(wrappedPlugin);
}

function resolveObject (obj) {
  var resolvedObject = {};
  var promises = [];

  for (var m in obj) {
    (function (m) {
      (function (m) {
        if (isFunction(obj[m].then)) {
          promises.push(obj[m].then(function (result) {
            return resolveObject(result).then(function (resolvedProperty) {
              if (isFunction(resolvedProperty)) {
                resolvedObject[m] = proxyMember(obj, m);
              } else {
                resolvedObject[m] = resolvedProperty;
              }
            });
          }));
        } else {
          resolvedObject[m] = obj[m];
        }
      })(m);
    })(m);
  }

  if (promises.length == 0) {
    return new Promise(function (resolve) {
      resolve(obj);
    });
  } else {

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return Promise.all(promises).then(function () {
return resolvedObject;
});
}
}

function wrapNewPluginWithOldInterface () {
var wrappedPlugin = {};

for (var m in this) {
if (isFunction(this[m])) {
wrappedPlugin[m] = (function(plugin, member) {
return function() {
var successCallback = arguments[arguments.length - 2];
var errorCallback = arguments[arguments.length - 1];
var args = Array.prototype.slice.call(arguments, 0, -2);
return member.apply(plugin, args).then(function (result) {
successCallback(result);
}, function (error) {
errorCallback(error.message);
});
});
})(this, this[m]);
} else {
wrappedPlugin[m] = this[m];
}
}

return new Promise(function (resolve) {
resolve(wrappedPlugin);
});
}

function wrapOldPluginWithOldInterface () {
var unwrappedPlugin = { originalObject: this.originalObject };

for (var m in this.originalObject) {
unwrappedPlugin[m] = proxyMember(this.originalObject, m);
}

return new Promise(function (resolve) {
resolve(unwrappedPlugin);
});
}

function wrapOldPluginWithNewInterface (plugin) {
var wrappedPlugin = {
originalObject: plugin,
wrapWithOldInterface: wrapOldPluginWithOldInterface
};

for (var m in plugin) {
if (isFunction(plugin[m])) {
wrappedPlugin[m] = (function (plugin, member) {
return function() {
var args = Array.prototype.slice.call(arguments);
return new Promise(function (resolve, reject) {
args.push(resolve, reject);
member.apply(plugin, args);
});
});
})(plugin, plugin[m]);
} else {
wrappedPlugin[m] = plugin[m];
}
}

return new Promise(function (resolve) {
resolve(wrappedPlugin);
});
}

if (extension) {
initializeExtension();
} else if (navigator.mimeTypes && navigator.mimeTypes[pluginMimeType]) {
initialize();
} else {
try {
var plugin = new ActiveXObject("Aktiv.CryptoPlugin");
initialize();
} catch (e) {
initializeWithoutPlugin();
}
}
}

```

```
return my;
}(rutoken || {}));

if (typeof module !== 'undefined') {
  module.exports = rutoken;
}
```