

Modul:Protection banner

Vorlage:Lua This module creates protection banners and padlock icons that are placed at the top of **protected pages**.

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Usage

Most users will not need to use this module directly. For adding protection templates to pages you can use the **Vorlage:TI** template, or you may find it more convenient to use one of the more specific protection templates in the table below.

Vorlage:Protection templates

From wikitext

```

{{#invoke:Protection banner|main
| 1          = reason
| small      = yes/no
| action     = action
| date       = protection date
| user       = username
| section    = talk page section name
| category   = no
}}
```

The `#invoke` syntax can be used for creating protection templates more specific than **Vorlage:TI**. For example, it is possible to create a protection template which always shows a padlock icon by using the code `{{#invoke:Protection banner|main|small=yes}}`. Pages which call this template will still be able to use other arguments, like *action*. However, this only works one level deep; a page calling a template which calls another template containing the above code will not automatically be able to use parameters like *action*.

Note: You should no longer specify the expiry, as it is automatically retrieved in all cases.

From Lua

First, load the module.

```
local mProtectionBanner = require('Module:Protection banner')
```

Then you can make protection banners by using the `_main` function.

```
mProtectionBanner._main(args, cfg, titleObj)
```

args is a table of arguments to pass to the module. For possible keys and values for this table, see the [parameters section](#). The *cfg* and *titleObj* variables are intended only for testing; *cfg* specifies a customised config table to use instead of [Module:Protection banner/config](#), and *titleObj* specifies a mw.title object to use instead of the current title. *args*, *cfg* and *titleObj* are all optional.

Parameters

All parameters are optional.

- **1** - the reason that the page was protected. If set, this must be one of the values listed in the [reasons table](#).
- **small** - if set to "yes", "y", "1", or "true", a padlock icon is generated instead of a full protection banner.
- **action** - the protection action. Must be one of "edit" (for normal protection), "move" (for move-protection) or "autoreview" (for pending changes). The default value is "edit".
- **date** - the protection date. This must be valid input to the second parameter of the [#time parser function](#). This argument has an effect for reasons that use the PROTECTIONDATE parameter in their configuration. As of July 2014, those were the "office" and "reset" reasons.
- **user** - the username of the user to generate links for. As of July 2014, this only has an effect when the "usertalk" reason is specified.
- **section** - the section name of the protected page's talk page where discussion is taking place. This works for most, but not all, values of *reason*.
- **category** - categories are suppressed if this is set to "no", "n", "0", or "false".
- **catonly** - if set to "yes", "y", "1", or "true", will only return the protection categories, and not return the banner or padlock. This has no visible output.

Reasons

The following table contains the available reasons, plus the actions for which they are available.

Skriptfehler: Ein solches Modul „Protection banner/documentation“ ist nicht vorhanden.



Errors

Below is a list of some of the common errors that this module can produce, and how to fix them.

Invalid protection date

Vorlage:Error

This error is produced if you supply a [Vorlage:Para](#) parameter value that is not recognised as a valid date by the `#time` parser function. If in doubt, you can just use a date in the format "dd Month YYYY", e.g. "27 April 2025". To see a full range of valid inputs, see the [#time documentation](#) (only the first parameter, the *format string*, may be specified).

Invalid action

Vorlage:Error

This error is produced if you specify an invalid protection action. There are only three valid actions: `edit` (the default, for normal protection), `move` (for move-protection), and `autoreview` (for [pending changes](#)). This should only be possible if you are using a template that supports manually specifying the protection action, such as [Vorlage:TI](#), or if you are using `#invoke` directly. If this is not the case, please leave a message on [Module talk:Protection banner](#).

Reasons cannot contain the pipe character

Vorlage:Error

This error is produced if you specify a reason using the [Vorlage:Para](#) parameter that includes a pipe character (`|`). Please check that you are not entering the [Vorlage:TI](#) template into this parameter by mistake. The pipe character is disallowed as the module uses it internally. A list of valid reasons can be seen in the [reasons section](#).

Other errors

If you see an error other than the ones above, it is likely to either be a bug in the module or mistake in the configuration. Please post a message about it at [Module talk:Protection banner](#).

Technical details

This module uses configuration data from [Module:Protection banner/config](#). Most of the module's behaviour can be configured there, making it easily portable across different wikis and different languages.

General test cases for the module can be found at [Module:Protection banner/testcases](#), and test cases specific to enwiki's config can be found at [Module:Protection banner/config/testcases](#).

Bug reports and feature requests should be made on [the module's talk page](#).



```
-- This module implements {{pp-meta}} and its daughter templates such as
-- {{pp-dispute}}, {{pp-vandalism}} and {{pp-sock}}.

-- Initialise necessary modules.
require('Module:No globals')
local makeFileLink = require('Module:File link')._main
local effectiveProtectionLevel = require('Module:Effective protection level')._main
local effectiveProtectionExpiry = require('Module:Effective protection expiry')._main
local yesno = require('Module:Yesno')

-- Lazily initialise modules and objects we don't always need.
local getArgs, makeMessageBox, lang

-- Set constants.
local CONFIG_MODULE = 'Module:Protection banner/config'

-----
-- Helper functions
-----

local function makeCategoryLink(cat, sort)
    if cat then
        return string.format(
            '[[%s:%s|%s]]',
            mw.site.namespaces[14].name,
            cat,
            sort
        )
    end
end

-- Validation function for the expiry and the protection date
local function validateDate(dateString, dateType)
    if not lang then
        lang = mw.language.getContentLanguage()
    end
    local success, result = pcall(lang.formatDate, lang, 'U', dateString)
    if success then
        result = tonumber(result)
        if result then
            return result
        end
    end
    error(string.format(
        'invalid %s: %s',
        dateType,
        tostring(dateString)
    ), 4)
end

local function makeFullUrl(page, query, display)
    return string.format(
        '[%s %s]',
        tostring(mw.uri.fullUrl(page, query)),
        display
    )
end

-- Given a directed graph formatted as node -> table of direct successors,
-- get a table of all nodes reachable from a given node (though always
-- including the given node).
local function getReachableNodes(graph, start)
    local toWalk, retval = {[start] = true}, {}
    while true do

```



```
-- Can't use pairs() since we're adding and removing things as we
local k = next(toWalk) -- This always gets the "first" key
if k == nil then
    return retval
end
toWalk[k] = nil
retval[k] = true
for _,v in ipairs(graph[k]) do
    if not retval[v] then
        toWalk[v] = true
    end
end
end
end
end

-----
-- Protection class
-----

local Protection = {}
Protection.__index = Protection

Protection.supportedActions = {
    edit = true,
    move = true,
    autoreview = true,
    upload = true
}

Protection.bannerConfigFields = {
    'text',
    'explanation',
    'tooltip',
    'alt',
    'link',
    'image'
}

function Protection.new(args, cfg, title)
    local obj = {}
    obj._cfg = cfg
    obj.title = title or mw.title.getCurrentTitle()

    -- Set action
    if not args.action then
        obj.action = 'edit'
    elseif Protection.supportedActions[args.action] then
        obj.action = args.action
    else
        error(string.format(
            'invalid action: %s',
            tostring(args.action)
        ), 3)
    end

    -- Set level
    obj.level = args.demolevel or effectiveProtectionLevel(obj.action, obj.ti
    if not obj.level or (obj.action == 'move' and obj.level == 'autoconfirmed
        -- Users need to be autoconfirmed to move pages anyway, so treat
        -- semi-move-protected pages as unprotected.
        obj.level = '*'
    end

    -- Set expiry
```

```
local effectiveExpiry = effectiveProtectionExpiry(obj.action, obj.title)
if effectiveExpiry == 'infinity' then
    obj.expiry = 'indef'
elseif effectiveExpiry ~= 'unknown' then
    obj.expiry = validateDate(effectiveExpiry, 'expiry date')
end

-- Set reason
if args[1] then
    obj.reason = mw.ustr.lower(args[1])
    if obj.reason:find('|') then
        error('reasons cannot contain the pipe character ("|")',
    end
end

-- Set protection date
if args.date then
    obj.protectionDate = validateDate(args.date, 'protection date')
end

-- Set banner config
do
    obj.bannerConfig = {}
    local configTables = {}
    if cfg.banners[obj.action] then
        configTables[#configTables + 1] = cfg.banners[obj.action]
    end
    if cfg.defaultBanners[obj.action] then
        configTables[#configTables + 1] = cfg.defaultBanners[obj
        configTables[#configTables + 1] = cfg.defaultBanners[obj
    end
    configTables[#configTables + 1] = cfg.masterBanner
    for i, field in ipairs(Protection.bannerConfigFields) do
        for j, t in ipairs(configTables) do
            if t[field] then
                obj.bannerConfig[field] = t[field]
                break
            end
        end
    end
end
end
return setmetatable(obj, Protection)
end

function Protection:isUserScript()
    -- Whether the page is a user JavaScript or CSS page.
    local title = self.title
    return title.namespace == 2 and (
        title.contentModel == 'javascript' or title.contentModel == 'css
    )
end

function Protection:isProtected()
    return self.level ~= '*'
end

function Protection:shouldShowLock()
    -- Whether we should output a banner/padlock
    return self:isProtected() and not self:isUserScript()
end

-- Whether this page needs a protection category.
Protection.shouldHaveProtectionCategory = Protection.shouldShowLock
```



```
function Protection:isTemporary()
    return type(self.expiry) == 'number'
end

function Protection:makeProtectionCategory()
    if not self:shouldHaveProtectionCategory() then
        return ''
    end

    local cfg = self._cfg
    local title = self.title

    -- Get the expiry key fragment.
    local expiryFragment
    if self.expiry == 'indef' then
        expiryFragment = self.expiry
    elseif type(self.expiry) == 'number' then
        expiryFragment = 'temp'
    end

    -- Get the namespace key fragment.
    local namespaceFragment = cfg.categoryNamespaceKeys[title.namespace]
    if not namespaceFragment and title.namespace % 2 == 1 then
        namespaceFragment = 'talk'
    end

    -- Define the order that key fragments are tested in. This is done with a
    -- array of tables containing the value to be tested, along with its
    -- position in the cfg.protectionCategories table.
    local order = {
        {val = expiryFragment,    keypos = 1},
        {val = namespaceFragment, keypos = 2},
        {val = self.reason,       keypos = 3},
        {val = self.level,        keypos = 4},
        {val = self.action,       keypos = 5}
    }

    --[[
    -- The old protection templates used an ad-hoc protection category system
    -- with some templates prioritising namespaces in their categories, and
    -- others prioritising the protection reason. To emulate this in this mod
    -- we use the config table cfg.reasonsWithNamespacePriority to set the
    -- reasons for which namespaces have priority over protection reason.
    -- If we are dealing with one of those reasons, move the namespace table
    -- the end of the order table, i.e. give it highest priority. If not, the
    -- reason should have highest priority, so move that to the end of the ta
    -- instead.
    --]]
    table.insert(order, table.remove(order, self.reason and cfg.reasonsWithNa

    --[[
    -- Define the attempt order. Inactive subtables (subtables with nil "valu
    -- fields) are moved to the end, where they will later be given the key
    -- "all". This is to cut down on the number of table lookups in
    -- cfg.protectionCategories, which grows exponentially with the number of
    -- non-nil keys. We keep track of the number of active subtables with the
    -- noActive parameter.
    --]]
    local noActive, attemptOrder
    do
        local active, inactive = {}, {}
        for i, t in ipairs(order) do
            if t.val then
                active[#active + 1] = t
            else
                inactive[#inactive + 1] = t
            end
        end
        attemptOrder = inactive
    end
end
```

```
                else
                    inactive[#inactive + 1] = t
                end
            end
            noActive = #active
            attemptOrder = active
            for i, t in ipairs(inactive) do
                attemptOrder[#attemptOrder + 1] = t
            end
        end
end

--[[
-- Check increasingly generic key combinations until we find a match. If
-- specific category exists for the combination of key fragments we are
-- given, that match will be found first. If not, we keep trying different
-- key fragment combinations until we match using the key
-- "all-all-all-all-all".
--
-- To generate the keys, we index the key subtables using a binary matrix
-- with indexes i and j. j is only calculated up to the number of active
-- subtables. For example, if there were three active subtables, the matrix
-- would look like this, with 0 corresponding to the key fragment "all",
-- 1 corresponding to other key fragments.
--
--   j 1  2  3
--   i
--   1  1  1  1
--   2  0  1  1
--   3  1  0  1
--   4  0  0  1
--   5  1  1  0
--   6  0  1  0
--   7  1  0  0
--   8  0  0  0
--
-- Values of j higher than the number of active subtables are set
-- to the string "all".
--
-- A key for cfg.protectionCategories is constructed for each value of i.
-- The position of the value in the key is determined by the keypos field
-- each subtable.
--]]
local cats = cfg.protectionCategories
for i = 1, 2^noActive do
    local key = {}
    for j, t in ipairs(attemptOrder) do
        if j > noActive then
            key[t.keypos] = 'all'
        else
            local quotient = i / 2 ^ (j - 1)
            quotient = math.ceil(quotient)
            if quotient % 2 == 1 then
                key[t.keypos] = t.val
            else
                key[t.keypos] = 'all'
            end
        end
    end
    end
    key = table.concat(key, '|')
    local attempt = cats[key]
    if attempt then
        return makeCategoryLink(attempt, title.text)
    end
end
```




```
        return ''
    end

    function Protection:isIncorrect()
        local expiry = self.expiry
        return not self:shouldHaveProtectionCategory()
            or type(expiry) == 'number' and expiry < os.time()
    end

    function Protection:isTemplateProtectedNonTemplate()
        local action, namespace = self.action, self.title.namespace
        return self.level == 'templateeditor'
            and (
                (action ~= 'edit' and action ~= 'move')
                or (namespace ~= 10 and namespace ~= 828)
            )
    end

    function Protection:makeCategoryLinks()
        local msg = self._cfg.msg
        local ret = {self:makeProtectionCategory()}
        if self:isIncorrect() then
            ret[#ret + 1] = makeCategoryLink(
                msg['tracking-category-incorrect'],
                self.title.text
            )
        end
        if self:isTemplateProtectedNonTemplate() then
            ret[#ret + 1] = makeCategoryLink(
                msg['tracking-category-template'],
                self.title.text
            )
        end
        return table.concat(ret)
    end

end

-----
-- Blurb class
-----

local Blurb = {}
Blurb.__index = Blurb

Blurb.bannerTextFields = {
    text = true,
    explanation = true,
    tooltip = true,
    alt = true,
    link = true
}

function Blurb.new(protectionObj, args, cfg)
    return setmetatable({
        _cfg = cfg,
        _protectionObj = protectionObj,
        _args = args
    }, Blurb)
end

-- Private methods --

function Blurb:_formatDate(num)
    -- Formats a Unix timestamp into dd Month, YYYY format.
    lang = lang or mw.language.getContentLanguage()
```

```
        local success, date = pcall(
            lang.formatDate,
            lang,
            self._cfg.msg['expiry-date-format'] or 'j F Y',
            '@' .. tostring(num)
        )
        if success then
            return date
        end
    end

end

function Blurb:_getExpandedMessage(msgKey)
    return self:_substituteParameters(self._cfg.msg[msgKey])
end

function Blurb:_substituteParameters(msg)
    if not self._params then
        local parameterFuncs = {}

        parameterFuncs.CURRENTVERSION = self._makeCurrentVersionParameter
        parameterFuncs.EDITREQUEST = self._makeEditRequestParameter
        parameterFuncs.EXPIRY = self._makeExpiryParameter
        parameterFuncs.EXPLANATIONBLURB = self._makeExplanationBlurbParameter
        parameterFuncs.IMAGELINK = self._makeImageLinkParameter
        parameterFuncs.INTROBLURB = self._makeIntroBlurbParameter
        parameterFuncs.INTROFRAGMENT = self._makeIntroFragmentParameter
        parameterFuncs.PAGETYPE = self._makePagetypeParameter
        parameterFuncs.PROTECTIONBLURB = self._makeProtectionBlurbParameter
        parameterFuncs.PROTECTIONDATE = self._makeProtectionDateParameter
        parameterFuncs.PROTECTIONLEVEL = self._makeProtectionLevelParameter
        parameterFuncs.PROTECTIONLOG = self._makeProtectionLogParameter
        parameterFuncs.TALKPAGE = self._makeTalkPageParameter
        parameterFuncs.TOOLTIPBLURB = self._makeTooltipBlurbParameter
        parameterFuncs.TOOLTIPFRAGMENT = self._makeTooltipFragmentParameter
        parameterFuncs.VANDAL = self._makeVandalTemplateParameter

        self._params = setmetatable({}, {
            __index = function (t, k)
                local param
                if parameterFuncs[k] then
                    param = parameterFuncs[k](self)
                end
                param = param or ''
                t[k] = param
                return param
            end
        })
    end

    msg = msg:gsub('${(%u+)}', self._params)
    return msg
end

function Blurb:_makeCurrentVersionParameter()
    -- A link to the page history or the move log, depending on the kind of
    -- protection.
    local pagename = self._protectionObj.title.prefixedText
    if self._protectionObj.action == 'move' then
        -- We need the move log link.
        return makeFullUrl(
            'Special:Log',
            {type = 'move', page = pagename},
            self:_getExpandedMessage('current-version-move-display')
        )
    end
end
```

```
        else
            -- We need the history link.
            return makeFullUrl(
                pagename,
                {action = 'history'},
                self:_getExpandedMessage('current-version-edit-display')
            )
        end
    end
end

function Blurb:_makeEditRequestParameter()
    local mEditRequest = require('Module:Submit an edit request')
    local action = self._protectionObj.action
    local level = self._protectionObj.level

    -- Get the edit request type.
    local requestType
    if action == 'edit' then
        if level == 'autoconfirmed' then
            requestType = 'semi'
        elseif level == 'extendedconfirmed' then
            requestType = 'extended'
        elseif level == 'templateeditor' then
            requestType = 'template'
        end
    end
    requestType = requestType or 'full'

    -- Get the display value.
    local display = self:_getExpandedMessage('edit-request-display')

    return mEditRequest._link{type = requestType, display = display}
end

function Blurb:_makeExpiryParameter()
    local expiry = self._protectionObj.expiry
    if type(expiry) == 'number' then
        return self:_formatDate(expiry)
    else
        return expiry
    end
end

function Blurb:_makeExplanationBlurbParameter()
    -- Cover special cases first.
    if self._protectionObj.title.namespace == 8 then
        -- MediaWiki namespace
        return self:_getExpandedMessage('explanation-blurb-nounprotect')
    end

    -- Get explanation blurb table keys
    local action = self._protectionObj.action
    local level = self._protectionObj.level
    local talkKey = self._protectionObj.title.isTalkPage and 'talk' or 'subject'

    -- Find the message in the explanation blurb table and substitute any
    -- parameters.
    local explanations = self._cfg.explanationBlurbs
    local msg
    if explanations[action][level] and explanations[action][level][talkKey] then
        msg = explanations[action][level][talkKey]
    elseif explanations[action][level] and explanations[action][level].default then
        msg = explanations[action][level].default
    elseif explanations[action].default and explanations[action].default[talkKey] then
        msg = explanations[action].default[talkKey]
    end
end
```

```
        msg = explanations[action].default[talkKey]
    elseif explanations[action].default and explanations[action].default.defa
        msg = explanations[action].default.default
    else
        error(string.format(
            'could not find explanation blurb for action "%s", level
            action,
            level,
            talkKey
        ), 8)
    end
    return self:_substituteParameters(msg)
end

function Blurb:_makeImageLinkParameter()
    local imageLinks = self._cfg.imageLinks
    local action = self._protectionObj.action
    local level = self._protectionObj.level
    local msg
    if imageLinks[action][level] then
        msg = imageLinks[action][level]
    elseif imageLinks[action].default then
        msg = imageLinks[action].default
    else
        msg = imageLinks.edit.default
    end
    return self:_substituteParameters(msg)
end

function Blurb:_makeIntroBlurbParameter()
    if self._protectionObj.isTemporary() then
        return self:_getExpandedMessage('intro-blurb-expiry')
    else
        return self:_getExpandedMessage('intro-blurb-noexpiry')
    end
end

function Blurb:_makeIntroFragmentParameter()
    if self._protectionObj.isTemporary() then
        return self:_getExpandedMessage('intro-fragment-expiry')
    else
        return self:_getExpandedMessage('intro-fragment-noexpiry')
    end
end

function Blurb:_makePagetypeParameter()
    local pagetypes = self._cfg.pagetypes
    return pagetypes[self._protectionObj.title.namespace]
        or pagetypes.default
        or error('no default pagetype defined', 8)
end

function Blurb:_makeProtectionBlurbParameter()
    local protectionBlurbs = self._cfg.protectionBlurbs
    local action = self._protectionObj.action
    local level = self._protectionObj.level
    local msg
    if protectionBlurbs[action][level] then
        msg = protectionBlurbs[action][level]
    elseif protectionBlurbs[action].default then
        msg = protectionBlurbs[action].default
    elseif protectionBlurbs.edit.default then
        msg = protectionBlurbs.edit.default
    else
```

```
        error('no protection blurb defined for protectionBlurbs.edit.default')
    end
    return self:_substituteParameters(msg)
end

function Blurb:_makeProtectionDateParameter()
    local protectionDate = self._protectionObj.protectionDate
    if type(protectionDate) == 'number' then
        return self:_formatDate(protectionDate)
    else
        return protectionDate
    end
end

function Blurb:_makeProtectionLevelParameter()
    local protectionLevels = self._cfg.protectionLevels
    local action = self._protectionObj.action
    local level = self._protectionObj.level
    local msg
    if protectionLevels[action][level] then
        msg = protectionLevels[action][level]
    elseif protectionLevels[action].default then
        msg = protectionLevels[action].default
    elseif protectionLevels.edit.default then
        msg = protectionLevels.edit.default
    else
        error('no protection level defined for protectionLevels.edit.default')
    end
    return self:_substituteParameters(msg)
end

function Blurb:_makeProtectionLogParameter()
    local pagename = self._protectionObj.title.prefixedText
    if self._protectionObj.action == 'autoreview' then
        -- We need the pending changes log.
        return makeFullUrl(
            'Special:Log',
            {type = 'stable', page = pagename},
            self:_getExpandedMessage('pc-log-display')
        )
    else
        -- We need the protection log.
        return makeFullUrl(
            'Special:Log',
            {type = 'protect', page = pagename},
            self:_getExpandedMessage('protection-log-display')
        )
    end
end

function Blurb:_makeTalkPageParameter()
    return string.format(
        '[[[:s:#s|s]]',
        mw.site.namespaces[self._protectionObj.title.namespace].talk.name,
        self._protectionObj.title.text,
        self._args.section or 'top',
        self:_getExpandedMessage('talk-page-link-display')
    )
end

function Blurb:_makeTooltipBlurbParameter()
    if self._protectionObj.isTemporary() then
        return self:_getExpandedMessage('tooltip-blurb-expiry')
    else

```



```
        return self:_getExpandedMessage('tooltip-blurb-noexpiry')
    end
end

function Blurb:_makeTooltipFragmentParameter()
    if self._protectionObj:isTemporary() then
        return self:_getExpandedMessage('tooltip-fragment-expiry')
    else
        return self:_getExpandedMessage('tooltip-fragment-noexpiry')
    end
end

function Blurb:_makeVandalTemplateParameter()
    return mw.getCurrentFrame():expandTemplate{
        title="vandal-m",
        args={self._args.user or self._protectionObj.title.baseText}
    }
end

-- Public methods --

function Blurb:makeBannerText(key)
    -- Validate input.
    if not key or not Blurb.bannerTextFields[key] then
        error(string.format(
            '"%s" is not a valid banner config field',
            tostring(key)
        ), 2)
    end

    -- Generate the text.
    local msg = self._protectionObj.bannerConfig[key]
    if type(msg) == 'string' then
        return self:_substituteParameters(msg)
    elseif type(msg) == 'function' then
        msg = msg(self._protectionObj, self._args)
        if type(msg) ~= 'string' then
            error(string.format(
                'bad output from banner config function with key
                .. ' (expected string, got %s)',
                tostring(key),
                type(msg)
            ), 4)
        end
        return self:_substituteParameters(msg)
    end
end

-----
-- BannerTemplate class
-----

local BannerTemplate = {}
BannerTemplate.__index = BannerTemplate

function BannerTemplate.new(protectionObj, cfg)
    local obj = {}
    obj._cfg = cfg

    -- Set the image filename.
    local imageFilename = protectionObj.bannerConfig.image
    if imageFilename then
        obj._imageFilename = imageFilename
    else

```

```
-- If an image filename isn't specified explicitly in the banner
-- generate it from the protection status and the namespace.
local action = protectionObj.action
local level = protectionObj.level
local namespace = protectionObj.title.namespace
local reason = protectionObj.reason

-- Deal with special cases first.
if (
    namespace == 10
    or namespace == 828
    or reason and obj._cfg.indefImageReasons[reason]
)
    and action == 'edit'
    and level == 'sysop'
    and not protectionObj:isTemporary()
then
    -- Fully protected modules and templates get the special
    -- padlock.
    obj._imageFilename = obj._cfg.msg['image-filename-indef']
else
    -- Deal with regular protection types.
    local images = obj._cfg.images
    if images[action] then
        if images[action][level] then
            obj._imageFilename = images[action][level]
        elseif images[action].default then
            obj._imageFilename = images[action].default
        end
    end
end
end
return setmetatable(obj, BannerTemplate)
end

function BannerTemplate:renderImage()
    local filename = self._imageFilename
        or self._cfg.msg['image-filename-default']
        or 'Transparent.gif'
    return makeFileLink{
        file = filename,
        size = (self.imageWidth or 20) .. 'px',
        alt = self._imageAlt,
        link = self._imageLink,
        caption = self.imageCaption
    }
end

-----
-- Banner class
-----

local Banner = setmetatable({}, BannerTemplate)
Banner.__index = Banner

function Banner.new(protectionObj, blurbObj, cfg)
    local obj = BannerTemplate.new(protectionObj, cfg) -- This doesn't need t
    obj.imageWidth = 40
    obj.imageCaption = blurbObj:makeBannerText('alt') -- Large banners use th
    obj._reasonText = blurbObj:makeBannerText('text')
    obj._explanationText = blurbObj:makeBannerText('explanation')
    obj._page = protectionObj.title.prefixedText -- Only makes a difference i
    return setmetatable(obj, Banner)
end
```

```
function Banner:__tostring()
    -- Renders the banner.
    makeMessageBox = makeMessageBox or require('Module:Message box').main
    local reasonText = self._reasonText or error('no reason text set', 2)
    local explanationText = self._explanationText
    local mbargs = {
        page = self._page,
        type = 'protection',
        image = self:renderImage(),
        text = string.format(
            "''''%s''''%s",
            reasonText,
            explanationText and '<br />' .. explanationText or ''
        )
    }
    return makeMessageBox('mbox', mbargs)
end

-----
-- Padlock class
-----

local Padlock = setmetatable({}, BannerTemplate)
Padlock.__index = Padlock

function Padlock.new(protectionObj, blurbObj, cfg)
    local obj = BannerTemplate.new(protectionObj, cfg) -- This doesn't need
    obj.imageWidth = 20
    obj.imageCaption = blurbObj:makeBannerText('tooltip')
    obj._imageAlt = blurbObj:makeBannerText('alt')
    obj._imageLink = blurbObj:makeBannerText('link')
    obj._indicatorName = cfg.padlockIndicatorNames[protectionObj.action]
        or cfg.padlockIndicatorNames.default
        or 'pp-default'
    return setmetatable(obj, Padlock)
end

function Padlock:__tostring()
    local frame = mw.getCurrentFrame()
    -- The nowiki tag helps prevent whitespace at the top of articles.
    return frame:extensionTag{name = 'nowiki'} .. frame:extensionTag{
        name = 'indicator',
        args = {name = self._indicatorName},
        content = self:renderImage()
    }
end

-----
-- Exports
-----

local p = {}

function p._exportClasses()
    -- This is used for testing purposes.
    return {
        Protection = Protection,
        Blurb = Blurb,
        BannerTemplate = BannerTemplate,
        Banner = Banner,
        Padlock = Padlock,
    }
end
```




```
function p._main(args, cfg, title)
  args = args or {}
  cfg = cfg or require(CONFIG_MODULE)

  local protectionObj = Protection.new(args, cfg, title)

  local ret = {}

  -- If a page's edit protection is equally or more restrictive than its
  -- protection from some other action, then don't bother displaying anything
  -- for the other action (except categories).
  if not yesno(args.catonly) and (protectionObj.action == 'edit' or
    args.demolevel or
    not getReachableNodes(
      cfg.hierarchy,
      protectionObj.level
    )[effectiveProtectionLevel('edit', protectionObj.title)])
  then
    -- Initialise the blurb object
    local blurbObj = Blurb.new(protectionObj, args, cfg)

    -- Render the banner
    if protectionObj:shouldShowLock() then
      ret[#ret + 1] = tostring(
        (yesno(args.small) and Padlock or Banner)
        .new(protectionObj, blurbObj, cfg)
      )
    end
  end

  -- Render the categories
  if yesno(args.category) ~= false then
    ret[#ret + 1] = protectionObj:makeCategoryLinks()
  end

  return table.concat(ret)
end

function p.main(frame, cfg)
  cfg = cfg or require(CONFIG_MODULE)

  -- Find default args, if any.
  local parent = frame.getParent and frame.getParent()
  local defaultArgs = parent and cfg.wrappers[parent:getTitle():gsub('/', sand

  -- Find user args, and use the parent frame if we are being called from a
  -- wrapper template.
  getArgs = getArgs or require('Module:Arguments').getArgs
  local userArgs = getArgs(frame, {
    parentOnly = defaultArgs,
    frameOnly = not defaultArgs
  })

  -- Build the args table. User-specified args overwrite default args.
  local args = {}
  for k, v in pairs(defaultArgs or {}) do
    args[k] = v
  end
  for k, v in pairs(userArgs) do
```



```
                args[k] = v
            end
        return p._main(args, cfg)
    end
    return p
```