
Reboot Game Modding Workshop Documentation

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In this workshop, we will be creating addons for [Battle for Wesnoth](#). We will be focusing on creating new units and factions, although you can create maps and scenarios if you want to (I suspect you won't have time to create a campaign).

[Battle for Wesnoth](#) has excellent resources for modding (see <http://wiki.wesnoth.org/Create>), and this document will refer to them as needed.

Contents:

Setting up your computer

1.1 The tools of the trade

In order to create new units, we need some tools.

First, we need **Battle for Wesnoth**. This should already be on the computer. Where exactly it is will depend on the computer (look for it in the menus).

Next, we need an image editor for **PNG** files. You will either have **GIMP** or **Photoshop** installed, and you will use this to create the images of the units we will be making.

Finally, we need a **text editor**. On Windows, **Notepad++** is what you will use. On OS X, **TextEdit** is what you want. On the **Raspberry Pis** (which run **Linux**, specifically **Debian**), **Text Editor** (also known as **Gedit**) will be your tool.

1.2 Where we put our stuff

Battle for Wesnoth has special directories for addons. The location of this directory depends on which OS you use. <http://wiki.wesnoth.org/EditingWesnoth> explains where these directories are, however you can always find them by going to Preferences → General → Paths from the main menu.

The specific directory we are looking for is the user data directory, and it is in this directory we need to create the directory `add-ons`.

Creating an Add-On

This is a short introduction to creating an add-on, see [Addon Structure](#) for more information about the correct structure of an add-on.

2.1 Add-on Layout

To create an add-on, you need to create a directory inside the `add-ons` directory with a name like `My_Amazing_Era`. The important part is that there should be no spaces (Underscores are used instead of spaces). This will hold all the things that you will create.

Inside this directory, you need to create a text file, using the text editor, named `_main.cfg`. This will hold the settings for your add-on.

In addition, you will need to create two more directories inside your add-on directory, `units` and `images/units` (there are other directories that go inside your add-on directory, but this is all we will need to create some units and play with them).

2.2 The `_main.cfg` file

The contents of the `_main.cfg` file set how your add-on is loaded. For our purposes, we want something like this:

```
1 #textdomain wesnoth-My_Amazing_Era
2
3 #ifdef MULTIPLAYER
4 [binary_path]
5     path=data/add-ons/My_Amazing_Era
6 [/binary_path]
7
8 {~add-ons/My_Amazing_Era/era.cfg}
9
10 [+units]
11     {~add-ons/My_Amazing_Era/units}
12 [/units]
13 #endif
```

You should be able to work out what each of these things do using [Addon Structure](#), and if you create maps/scenarios, how to add them to your `_main.cfg`.

Creating and Using Units

Now we get to the fun part, creating new units. Because there is so much we can do, we're going to focus on creating one unit, and only look at modifying a few bits.

There is a guide for creating units at <http://wiki.wesnoth.org/BuildingUnits>, but the basics will be given here. See <http://wiki.wesnoth.org/UnitTypeWML> and http://units.wesnoth.org/1.12/mainline/en_US/mainline.html for what is possible.

3.1 Creating a Unit Image

http://wiki.wesnoth.org/Creating_Unit_Art provides some rules for creating your unit image, but here's a short summary:

- The image must be 72x72 pixels
- It must be a PNG

Creating images from scratch is hard, so Battle for Wesnoth provides [frakenpacks](#), collections of unit parts which can be “glued together” to create a new unit. I'll give you a copy of the images so you don't need to download them.

Save your image in the `images/units` directory, giving it a useful name.

3.2 Setting unit attributes

To set the properties of a unit, we need to create a file inside the `units` directory of your add-on.

Here's an example of what you need in that file:

```
1 [unit_type]
2   id=Vampire
3   name= _ "Vampire"
4   race=undead
5   image="units/vampire.png"
6   ellipse="misc/ellipse"
7   {MAGENTA_IS_THE_TEAM_COLOR}
8   hitpoints=34
9   movement_type=undeadfoot
10  movement=7
11  experience=35
12  level=1
13  alignment=chaotic
```

```
14     advances_to=null
15     cost=20
16     usage=fighter
17     description= _ "Vampires are creatures of the night, looking to feed on unsuspecting victims." + {
18     [abilities]
19         {ABILITY_SKIRMISHER}
20     [/abilities]
21     [attack]
22         name=sword
23         description=_ "sword"
24         icon=attacks/longsword.png
25         type=blade
26         range=melee
27         damage=4
28         number=5
29         [specials]
30             {WEAPON_SPECIAL_BACKSTAB}
31         [/specials]
32     [/attack]
33     [attack]
34         name=fangs
35         description=_ "fangs"
36         icon=attacks/fangs.png
37         type=pierce
38         range=melee
39         damage=10
40         number=1
41         [specials]
42             {WEAPON_SPECIAL_DRAIN}
43             {WEAPON_SPECIAL_POISON}
44             {WEAPON_SPECIAL_PLAGUE}
45         [/specials]
46     [/attack]
47 [/unit_type]
```

There's a number of things you will need to set to get your unit working:

1. Set the path of the unit image (i.e. image) to the image file you created.
2. Set the id and name to something unique.

You also would want to modify the description, cost etc. to make your unit your own.

3.3 Adding your unit to a faction/era

To actually play with your unit, you need to add it to a faction in a era. The easiest thing to do is create a new era from the default era. To do this, create an `era.cfg` file in your add-on directory, with the following contents (replacing Vampire with your unit name):

```
[era]
    id=core_and_vampires
    name= _ "Core and Vampires"
    {RANDOM_SIDE}
    {multiplayer/factions/loyalists-default.cfg}
    {multiplayer/factions/rebels-default.cfg}
    {multiplayer/factions/northerners-default.cfg}
    {multiplayer/factions/knalgans-default.cfg}
```

```
{multiplayer/factions/drakes-default.cfg}

[multiplayer_side]
    id=Undead
    name= _"Undead"
    image="units/undead-necromancers/dark-sorcerer.png"
    {MAGENTA_IS_THE_TEAM_COLOR}
    type=Dark Sorcerer
    leader=Dark Sorcerer,Revenant,Deathblade,Bone Shooter,Necrophage
    random_leader=Dark Sorcerer,Revenant,Deathblade,Bone Shooter
    recruit=Skeleton,Skeleton Archer,Walking Corpse,Ghost,Vampire Bat,Dark Adept,Ghoul,Vampire
    terrain_liked=Ss, Hh, Ha, Ww
    [ai]
        recruitment_pattern=fighter,fighter,archer,fighter,scout,archer
    [/ai]
[/multiplayer_side]
[/era]
```

This has added your unit to the Undead faction. You could add it to a different faction, by changing what appears inside the `multiplayer_side` section.

Further information on factions and eras appears at <http://wiki.wesnoth.org/BuildingFactions> and <http://wiki.wesnoth.org/EraWML>.

Where You Go From Here

We've only scratched the surface of what you can create. Here's some ideas for what you can do:

- Create more units: you probably won't have time to make a whole faction, but you could create a set of units which advance into each other.
- Animate your unit: units have attack, defend and idle animations, you could create some for your unit.
- Add more unit properties: you could modify terrain movement cost, defence percentages or type resistances.
- Create a profile image: units have a large profile image, you could create one for your unit.

4.1 Presenting your work

At the end of the camp, we're going to have an expo of what everyone has created over the camp. We'll create a new faction made of everyone's units, and let people play with them.

Indices and tables

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- `search`