



Dominions 4 Thrones of Ascension

**Command Line Switches
& Environment Variables**

v4.06

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Content

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1 Introduction

This document is a guide to environment variables and command line switches in Dominions 4 and how to use them effectively for easier management of your Dominions 4 installation and automating certain repetitive tasks.

2 Environment Variables

Environment variables are variables that contain a directory path and can be used for shorthand for long directory paths. They are used to ease configuration of software and data in modern operating systems.

Dominions 4 environment variables determine where saved games, maps, mods or other things are stored, for example. They can be changed if you do not like the default settings.

You do not need to change the environment variables for the game to work, however. Change them only if you need to do so and only if you know what you are doing. Changing environment variables without knowing what you are doing can result in the game crashing, stopping working altogether, files going missing or other problems.

Dominions 4 uses the following environment variables. The entries describe what the variables do and their default locations on Linux, Windows and Mac operating systems.

For Windows systems, only Windows Vista and newer are covered by this document. Windows XP is not, because it is no longer supported by the operating system vendor (Microsoft).

Environment variables are typically named with all capital letters (e.g. ENVVAR), but when they are used as a reference, they are placed between percent signs (e.g. %ENVVAR%). Typing that into the address row of a file manager window (e.g. Windows Explorer) will take you to the directory defined by the environment variable.

Dominions 4 environment variables are listed on this page.

DOM4_DATA

Location of the Dominions 4 data files

Linux: ./data

Windows: \[Dominions4 installation dir]\data

Mac: ../Resources/data

DOM4_CONF

Configuration files will be saved here.

Linux: ~/dominions4

Windows: %APPDATA%\Dominions4\

Mac: ~/dominions4

Note that in Windows, %APPDATA% is also an environment variable. It is located in C:\Users\[username]\AppData\Roaming\ by default and the Dominions 4 user data folder is placed here. %APPDATA% is a hidden folder, so the easiest way to find your Dominions files is to go to the *Game Tools* menu and use the *Open User Data Directory* option.

DOM4_MAPS

Location of map files installed with the game.

Default (all): %DOM4_DATA%/maps

Note that if you see duplicate entries of maps, it is because you have the same map both here and in %DOM4_LOCALMAPS% (if you made an edited version) and the game reads them from two different places.

DOM4_SAVE

Save files will be put here.

Default (all): %DOM4_CONF%/savedgames

DOM4_LOCALMAPS

Location of user installed maps

Default (all): %DOM4_CONF%/maps

This is where the map editor and random map generator save maps, for example.

DOM4_MODS

Location of user installed mods

Default (all): %DOM4_CONF%/mods

This is where you should put any mod files you use.

3 Command Line Switches

3-1 What Are Command Line Switches?

For the benefit of those who are not familiar with the term, a short introduction to command line switches in order. The explanation here is rough and ready and intended to convey the gist of the concept at the expense of minutely detailed technical accuracy.

Command line switches are arguments that can be added when starting a program from a command line interface (CLI). CLI is text only and commands are typed. There is no graphical user interface (GUI) involved. Typical examples of CLI are *Terminal* on Linux or Mac and *Command Prompt* in Windows.

When programs are started from icons in a GUI environment, what happens is that a command is passed to a CLI, which then executes it. For example, starting Dominions 4 from the desktop icon in Windows instructs the operating system to start the program dominions4.exe from the Dominions 4 installation directory. The properties of the shortcut are [*Dominions 4 install directory*]\dominions4.exe.

Command line switches can be used to extend that basic command so that additional functions are done automatically. For example, it is possible to make a copy the shortcut and modify it by adding the -d switch to the end of the line to make Dominions 4 start in debug mode. Then the user has the option to start the game in normal mode (original shortcut) or debug mode (new shortcut) without going to the trouble of starting a CLI and typing everything every time.

Command line switches can be used to build scripts for various things, such as running Dominions 4 servers, creating big batches of random maps, automatically starting games with certain parameters etc etc. Regular users mostly do not need most of them.

Command line switches are also useful for creating external programs that then do something else, such as a graphical user interface for the built in random map generator to facilitate easier creation of customized random maps without constant text editing between map generation.

Command line switches are used according to the following formula:

dom4 [option(s)] [gamename]

Single letter switches preceded only by a single dash can be freely combined without needing to put each and every one of them separately, but the longer switches preceded by two dashes must be entered separately.

Examples:

dominions4 -wm

Run Dominions 4 in a window and without music.

dominions4 -d --winedgescroll --opacity 50

Run Dominions 4 in debug mode (level 1 debug) with edge scrolling always enabled and GUI opacity set to 50%.

3-2 General Options

-v | -version

Print version number and exit.

-h | -help

Prints list of all command line switches (except this) to stdout.txt (in the Dom4 dir) and exits.

-d

Increase debug level. This causes the game to create a debug log file in the Dom4 installation directory. More d adds more detail to the log.

-g | --host

Generate new turn and exit.

--verify

Verify all 2h-files and exit (creates .chk files)

--statfile

Create a player info file after each turn (stats.txt).

--scoredump

Create a score file after each turn (scores.html).

--finalhost

Generate new turn, send out final score message and exit.

-c | --nocredits

Disables the end credits.

--noedgescroll

Disables edge scrolling.

--edgescroll

Enables edge scrolling in fullscreen mode.

--winedgescroll

Enables edge scrolling always.

--askifplayed

Will ask if you want to redo turn if possible.

--noshowscouts

Do not show allied scouts on map.

--autoorder

Put new images on research by default.

--multiai X

Create up to X processes for AI computations (0=off). This switch only works on Linux and Mac. It cannot be used in Windows.

3-3 Audio Options

-s | --nosound

No sound effects or music

-m | --nomusic

No music

--musicvol X

Set music volume, 0-100 (default 100)

--fxvol X

Set sound effect volume, 0-100 (default 100)

--clickvol X

Set mouse click volume, 0-100 (default 25)

--noturnsound

Don't play a sound when a new turn arrives (network only)

--defsound

Use default sound device

--directsound

Use direct sound (Windows)

--waveout

Use waveout for sound (Windows)

--jack

Route sound through JACK sound server (Linux)

--pulseaudio

Route sound through pulse audio (Linux)

--arts

Route sound through aRts (Linux)

--alsa

Use direct alsa sound output (Linux)

--oss

Use direct oss sound output (Linux)

3-4 Network Options

-C | --tcpclient

Connect to a Dominions multiplayer server.

-S | --tcpserver

Start a Dominions multiplayer server.

--tcpquery

Query Dominions server about game status and exit.

--ipadr XXX

Use this IP-adr when connecting to server.

--port X

Use this port nbr.

--preexec CMD

Execute this command before each turn generation. These commands are not Dominions commands, but operating system commands, such as making backup of turn files to a different directory etc.

--postexec CMD

Execute this command after each turn generation. These commands are not Dominions commands, but operating system commands, such as making backup of turn files to a different directory etc.

-t | --hosttime X Y

Host on day X (0=sunday) hour Y (0-23).

--minutes X

Set host interval in minutes.

--hours X

Set host interval in hours.

--pauseday X

Stop timer on this day (0=sunday).

--noquickhost

Don't host just because all turns are done.

-n | --nonationsel

No nation selection when resuming a network game.

-o | --onserver

I'm playing on the server, don't ask.

--noclientstart

Clients cannot start the game during the *Choose Participants* phase.

--uploadtime X

Game is created after this many minutes.

--uploadmaxp X

Game is created if this many players join.

--closed <nation nbr>

Nation closed. Nation numbers 5-199.

--easyai <nation nbr>

Nation controlled by Easy AI.

--normai <nation nbr>

Nation controlled by Normal AI.

--diffai <nation nbr>

Nation controlled by Difficult AI.

--mightyai <nation nbr>

Nation controlled by Mighty AI.

--masterai <nation nbr>

Nation controlled by Master AI.

--impai <nation nbr>

Nation controlled by Impossible AI.

--team <nation nbr> <team nbr> <type>

Assigns nation to a team and sets its type (1=pretender, 2=disciple).

--statuspage XX

Create a html status page that shows who needs to play their turn.

--nodownlmods

Don't download mods from game server automatically.

3-5 New Game Options

--mapfile XXX

Filename of map. E.g. eye.map. Uses this map.

--randmap X

Make and use a random map with X provinces per player (10,15,20).

--research X

Research difficulty -1 to 3 (default 1).

--hofsize X

Size of Hall of Fame 5-15 (default 10).

--indepstr X

Strength of Independents 0-9 (default 5).

--magicsites X

Magic site frequency 0-75 (default 40).

--eventrarity X

Random event rarity (1-2), 1=common 2=rare.

--richness X

Money multiple 50-300 (default 100).

--resources X

Resource multiple 50-300 (default 100).

--supplies X

Supply multiple 50-300 (default 100).

--masterpass XX

Master password. E.g. masterblaster

--startprov X

Number of starting provinces (1-9).

--renaming

Enable commander renaming.

--scoregraphs

Enable score graphs during play.

--nonationinfo

No info at all on other nations.

--nocheatdet

Turns off cheat detection.

--era X

New game created in this era (1-3).

--nomods

Disable all mods.

-M | --enablemod XXX

Enable the mod with filename XXX.

--noartrest

Players can create more than one artifact per turn.

--teamgame

Disciple game, multiple players on same team.

--clustered

Clustered start positions for team game.

--storyevents

Enable story events.

--newgame

Create a new game and exit (for scripted game creation).

3-6 New Game Victory Condition

--conqall

Win by eliminating all opponents only.

--thrones X Y Z

Number of thrones of level 1, 2 and 3.

--requiredap X

Ascension points required for victory (default total-1).

--totalvp X

Victory points available in the world 0-25

--capitalvp

One extra victory per capital

--requiredvp X

Victory points required for victory (default total/2)

--summervp

Victory points are accumulated each summer.

3-7 Random Map Options

--makemap XXX

Generate a random map with filename XXX and exit.

--riverpart X

0-1000, 0=no rivers (default 50)

--seapart <percent>

Percent of map that is below water level (default 30)

--mountpart <percent>

Percent of map that is mountains (default 20)

--forestpart <percent>

Percent of lands that are forests (default 20)

--farmpart <percent>

Percent of lands that are farm lands (default 15)

--wastepart <percent>

Percent of lands that are wastes (default 10)

--swamppart <percent>

Percent of lands that are swamps (default 10)

--cavepart <percent>

Percent of lands that are caves (default 3)

--mapaa

Enable antialiasing for random maps

--mapsize <width> <height>

Set width and height of random map (default 1600 1200)

--mapprov X

Set number of provinces (default 150)

--passmount

Don't use impassable mountains on random maps. By default mountain ranges on random maps are impassable unless there is a mountain pass border. When this option is used, mountains become provinces of their own and use the terrain type mountain. By default almost all mountain provinces are border mountains.

--mapgcol <R> <G> <alpha>

Ground color 0-255 (default 170 146 116 255).

--mapscol <R> <G> <alpha>

Sea color 0-255 (default 54 54 130 255).

--mapdscol <R> <G> <alpha>

Deep Sea color 0-255 (default depending on mapscol).

--mapccol <R> <G> <alpha>

Coast color 0-255 (default depending on mapscol).

--mapbcol <R> <G> <alpha>

Ground border color 0-255.

--mapsbcoll <R> <G> <alpha>

Sea border color 0-255.

--mapnoise X

Ground color noise 0-255 (default 15).

--borderwidth X

Border width 0-500 (default 100). If you wish to modify a map and assign your own provinces and borders, set this value to 0 and edit the map.

--hills X

Number of Hills/Craters (default 150)

--ruggedness X

Ruggedness 0-100 (default 30)

--seasize X

Sea size, 100=normal land size (default 400)

--mapnospr

Don't draw any sprites on the map

--vwrap

Make map wrap north/south

--nohwrap

Prevent map from wrapping east/west

--mapbunch X

When making a bunch, make this many maps (default 12)

--quiet

Don't print information during map generation.

3-8 Graphics Options

-w | --window

Run Dominions 4 in a window

-u | --fullscreen

Use the entire screen

--bitplanes X

Try to use a color depth of X bits per pixel

--zbuffer X

Try to use a depth buffer of X bits per pixel
(default 24)

-T | --textonly

Use this with --tcpserver to get graphicless server

--gamma X

Set gamma function (brightness) 0.1 - 5.0
(default 1.0)

--opacity X

Set GUI opacity 0 - 100

-r | --res X Y

Set screen resolution / window size (default 1024
768)

--animback

Use animated backgrounds

-a | --noanimback

Don't use animated backgrounds

--fade

Use fade effects

-f | --nofade

No fade effects

--nopopups

No helpful popups

--maxfps X

Maximum nbr of frames per second (default 60)

--filtering X

Quality of OpenGL filtering 0-3 (default 2)

--maxtexsize X

Max texture size in pixels 8-4096 (default
unlimited)

--texqual X

Texture quality 1-5 (default 3)

--nolightfx

No light effects in battles

--partamount X

Max nbr of particles 0-8 (0=none, 4=default,
8=max)

--noarcade

Don't draw floating damage numbers

--nonetinfo

Don't draw timer and flags during network play

--noglext

Don't use any OpenGL extensions

--vsync

Enable vsync

-V | --novsync

Disable vsync

-x | --fastgrx

Faster and simpler graphics

--gfxlevel X

Graphics level 5-20 (default 10, 14 = very high)

--benchmark

Run a graphics benchmark and exit