

# Welcome to Stonecraft

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Stonecraft is an InfiniMiner/Minecraft inspired game started in 2016 based on the Minetest open-source voxel game engine. It will be kept lightweight enough to run on fairly old hardware.

Stonecraft is open-source and free, released under the GNU Lesser General Public License (LGPL). Thanks a lot to the minetest community, to "Notch" the creator of Minecraft and to Linus Torvalds, the creator of the free operating system Linux.

Like in other block sandbox games, you can build and destroy blocks everywhere in a near infinite world. There are two game modes, in survival mode you can lose your life, so you have to fight against many creatures and hunger in a dangerous world with many dungeons and woods of spiders. In creative mode you have access to all blocks, items and tools to build all you can imagine. Choose if you want to play either as singleplayer or multiplayer on servers with your friends. If you like, you can run your own Stonecraft server.

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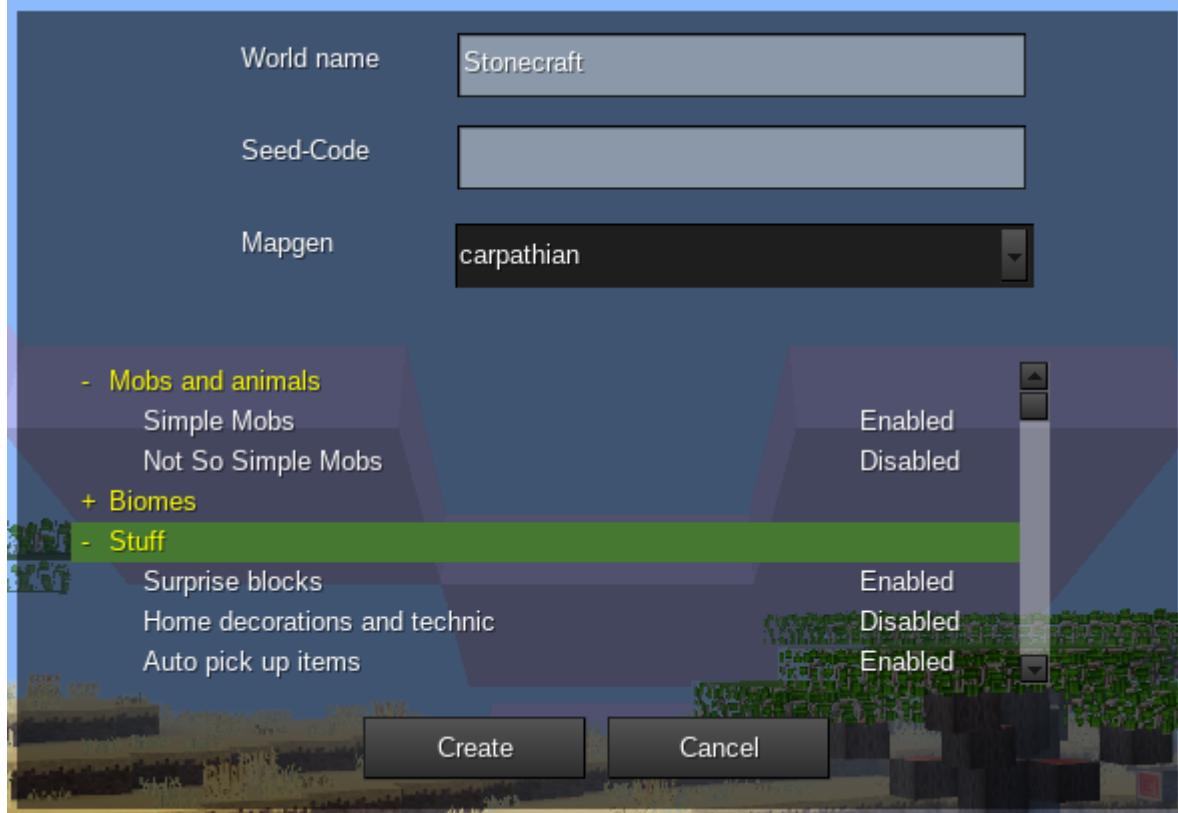
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## First steps

### Creating a world

First, before you can play, you have to create a world. In the world creation dialog you can choose a map generator (default v7) which is responsible for the terrain generation. Then you can add additional biomes and choose other cool stuff.



Note: Some settings need huge cpu consumption so it can be laggy for most players.

## Map generator

There are a number of different map generators. It is possible to choose between them when creating a map. Some mods may change them radically, also all map generators allow for a lot of configuration in the advanced settings menu.

v5

Generates landscapes based on 3D Perlin noise and is notable for its unique and somewhat strange terrain shape and occasional floating islands. The biomes have to be defined by mods first, otherwise it will be a stone-only landscape.



## v6

Generated entirely using 2D Perlin noise and has somewhat more “realistic” terrain than v5. The weirdness of v5 is gone. This map generator has predefined biomes: Grasslands/forest, jungle, desert, taiga, tundra and gravel. The biomes can't be modified by mods. Because of the nature of v6, the biomes are much simpler than in the other map generators, and a couple of blocks found in the other map generators can't be found in v6 maps (for example: Silver Sand, Acacia Tree, Orange Coral)



## v7

Some innovations over v7, uses 2D and 3D Perlin noise. It is the default selection since Minetest 0.4.15. This map generator is notable for many simple broad and deep “rivers” (or “ridges”) at Ocean level, but they can be disabled. Like in v5, the biome have to be defined by mods first



## valleys

Generates a landscape featuring many hills, mountains and valleys. The valleys often contain rivers with River Water. The rivers very different than in v7, since they are not at ocean level and actually flow downhill



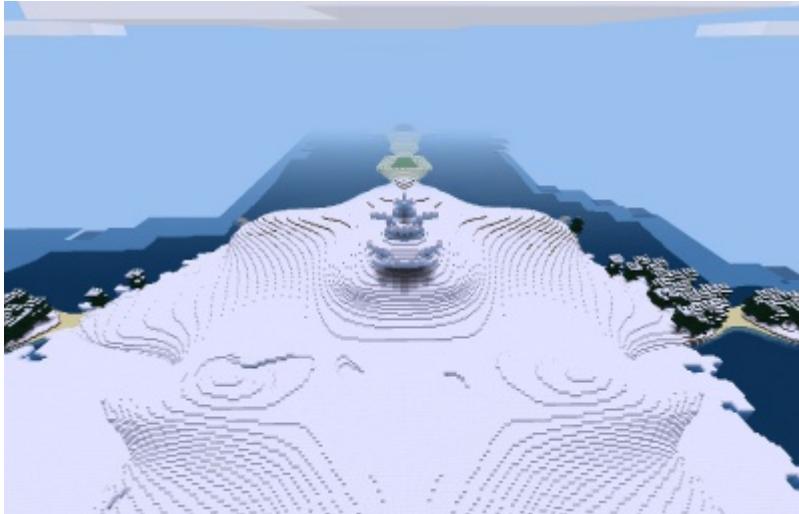
### **flat**

This generates an (almost) entirely flat world with some biomes like in v7. Caves can still appear underground (if not disabled) and the map generator can be configured to add occasional hills and lakes.



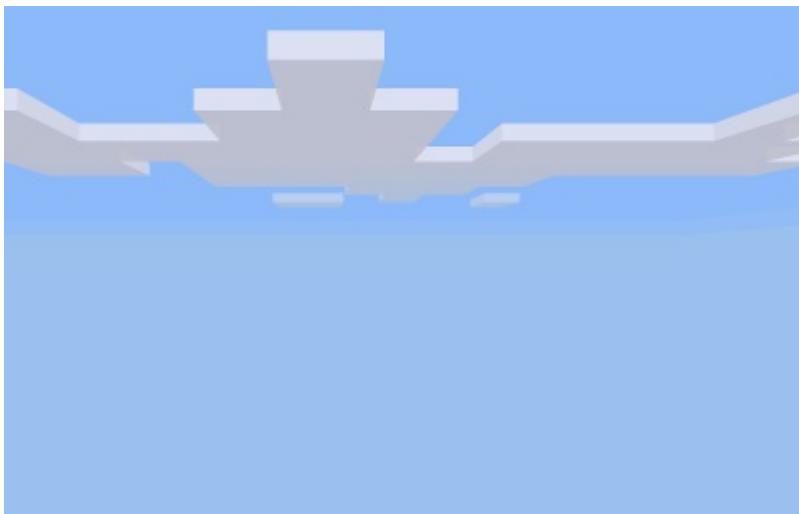
### **fractal**

Generates a map based on a fractal. It creates by far the weirdest terrain shapes, but its results are mostly predictable. It is possible to choose one of many fractals which are based on the Mandelbrot and Julia set, which is chosen in the advanced settings menu (technical setting name "mgfractal\_fractal").



### **singlenode**

By default, this produces a world with only air everywhere. To be precise, it produces only one type of block, air by default. It is useful for mapgen mods which define their own map generation: first, air is generated, then the mod applies its own functions which generates the terrain.



### **carpathian**

A mapgen featuring a flat base terrain with three types of terrain variation - rolling hills, ridged and step (terraced) mountains. The aim was to create a mapgen with a flat base, somewhere where you can build a village, even a city. But to differentiate it from the flat mapgen, the flat areas are surrounded by hills and various mountain ranges.

Features:

- Vast plains, average y-level between 5-10
- Rolling hills - small hills.
- Ridged mountains - mountains of a similar height will connect with a ridge.
- Step (terrace) mountains - mountains, sometimes a stair like effect.
- Fjords - particularly where the larger mountains meet the sea. Rare.
- Really big mountains - where two or even three mountain noise meet, spectacular and

unpredictable peaks form.



## Biomes

Biomes are a part of the map generation. Biomes are areas with similar ground and underground and vegetation. The biomes depend on the map generator used. Most map generators have the same biomes, but v6 is different.

### v5, v7, valleys, flat and fractal

Biomes in these map generators are defined by optional settings in Stonecraft like Ethereal, swamp and cave biomes and so on. If these are not defined, these map generators only generate stone worlds. Biomes in these map generators are not linked to the terrain shape; this means any biome (including grasslands) can form in flat or very mountainous areas. This section shows the biomes used by Stonecraft.

#### Grassland

Grassland has large amounts of Dirt nodes and Dirt with Grass blocks, on which flowers, Grass and bushes may appear naturally in this area. The underground is made of stone.



#### Coniferous forest

Coniferous forests grow in colder areas and are filled with pine trees. Pine tree forests can also be

covered with snow in cold regions.



### Deciduous forest

Deciduous forests are one of the most common biomes in Stonecraft and form in temperate zones. Trees, apple trees and aspen trees grow here naturally. Generally forests can spawn lakes, ponds, and rivers inside of it. Deciduous forests usually surround plains.



### Rainforest

Rainforests (or jungles) are made of large jungle trees which grow thickly packed together. Jungle Grass and Jungle Trees bearing Jungle Leaves spawn here naturally. On fallen jungle tree logs, brown mushrooms may appear rarely. Jungles near oceans form a swamp with waterlilies.





## Savanna

The savanna is a dry land which is not a desert, it is populated with acacia trees and dry grass. Flat water bordering to savannahs is likely to have waterlilies and papyri.



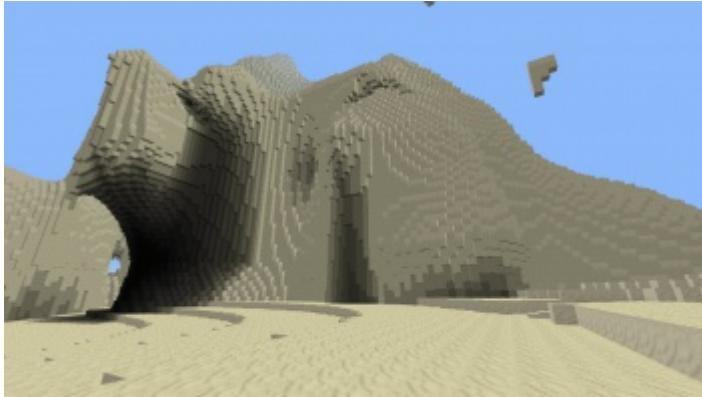
## Desert

Deserts contain large amounts of desert sand and desert stone. Cacti and dry shrubs also spawn here naturally on desert sand. Cacti can form in two different shapes. Deserts form in hot and dry areas.



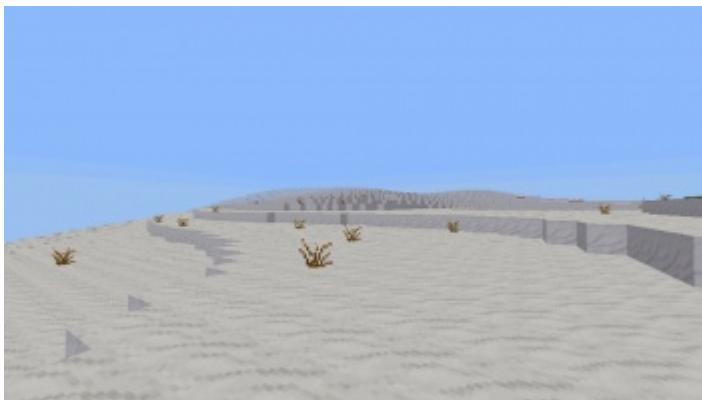
## Sandstone desert

Sandstone deserts are large barren areas covered by sand with sandstone below. They form in temperate and dry climates.



### Cold desert

Cold deserts are large barren areas covered by large amounts of silver sand on top of stone. They form in cold and dry areas.



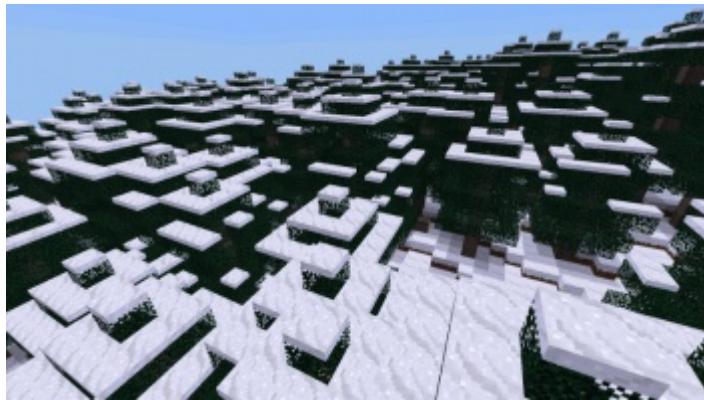
### Snowy grassland

The snowy grassland biome usually borders grasslands and is completely covered by a thin layer of snow on top of dirt with snow. A few snow-covered bushes can be found here.



### Taiga

Taigas are cold snow-covered biomes with rich vegetation with snow and dirt with snow as surface. They are populated with snow-covered pine trees. In pine tree forests, mushrooms may appear rarely on fallen pine tree logs.



## Tundra

Tundras are barren biomes in very cold climates with no vegetation and a single layer of snow blocks on top of stone. They are usually found between taigas, snowy grass lands and glaciers. This is one of the few biomes where snow blocks (rather than just snow) generates.



## Glacier

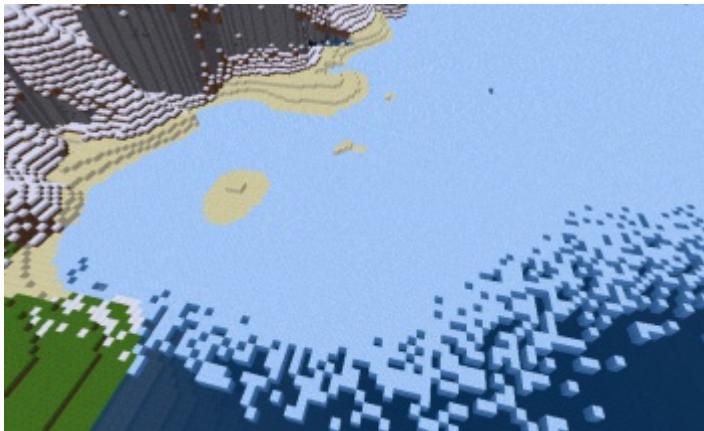
Glaciers form only in the coldest regions and are made of large amounts of ice, covered by a thick layer of snow blocks without any vegetation. Glacier biomes can be either mountain-like as in the screenshot or very flat. Glacier biomes generally border ice sheet biomes near oceans.



## Ice sheet

Ice sheets form only in the coldest regions on top of oceans and generally border glacier biomes. Ice sheets are very flat and consist of a single layer of snow blocks with up to 10 layers of ice beneath,

“floating” above water in deep oceans.



## v6

The v6 map generator has a predefined set of biomes which can't be changed by mods directly. The outcome in different subgames will generally be very similar. Biomes in v6 also somewhat determine the terrain shape. In general, v6 biomes are a lot simpler than the biomes of the other map generators.

### Plains

Plains are a quite flat biome. Large amounts of Dirt nodes and Dirt with Grass blocks, on which flowers and Grass may appear naturally (since 0.4.7). There are no bushes. The underground is made of stone.



### Forest

Forests are one of the most common biomes in v6 and form in temperate zones. Trees and apple trees grow here naturally, but no aspen trees. Forests usually surround plains. There are no fallen tree logs either.



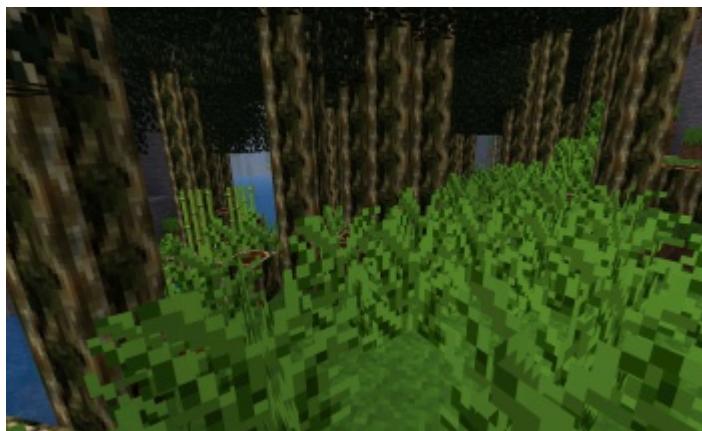
## Desert

Deserts contain large amounts of desert sand and desert stone and often form large cliffs or canyons. Cacti and dry shrubs also spawn here naturally in clusters on desert sand. Deserts spawn underground rivers and lakes which can be over 200 blocks deep. In v6, cacti only form in a "column" shape of up to 4 blocks high.



## Jungle

Jungles contains large trees which grow thickly packed together. Jungle Grass and Jungle Trees bearing Jungle Leaves spawn here naturally. Jungles in v6 very similar to the jungles in the other map generators, but there are no fallen tree logs, mushrooms or swamps.



## Taiga

The surface is covered with snow blocks on top of dirt with snow. Snow-covered pine tree forests are common in this biome.



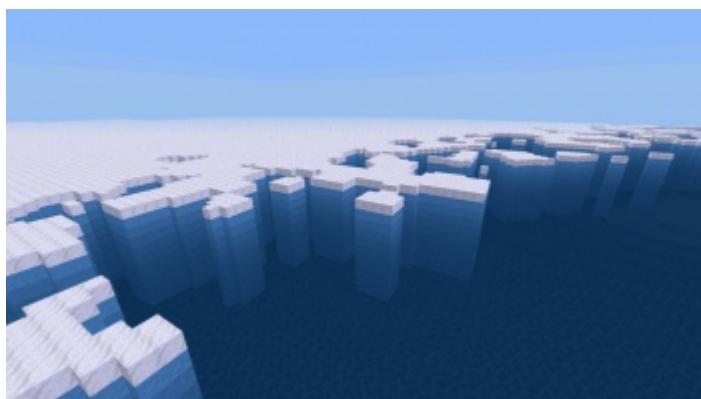
### Tundra

Tundras are large open fields with thin layers of snow and are populated by dry shrubs. There are two variations of this biome.



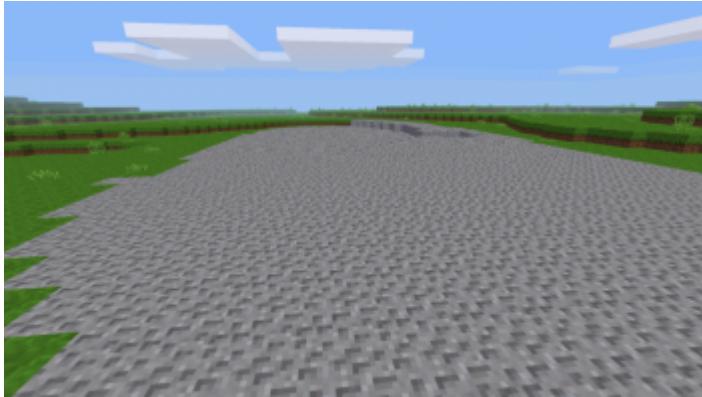
### Ice sheet

Ice sheets are two layers of ice on top of ocean water. They generate bordering directly to taigas and tundras.



### Gravel

Very rarely, unusually large areas of gravel can appear on the surface. These areas consist of nothing but gravel.



## Technical biomes

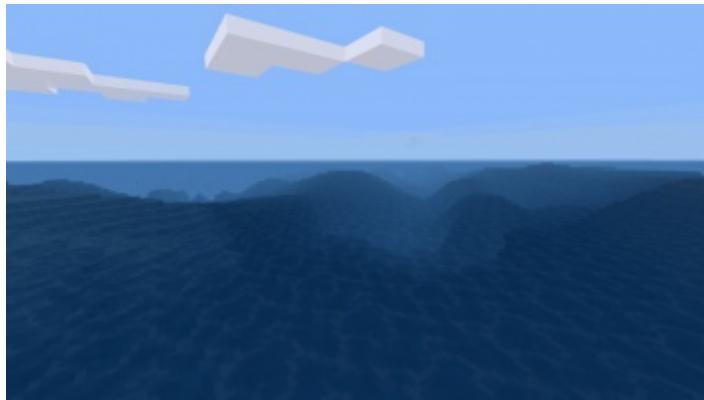
### Beach

Beaches are made out of sand and form at height of Y=2 and below, which is near the sea level by default. Beaches often extend deep into the ocean, which can easily turn a large part of the ocean floor into sand. The sand replaces the floor of other biomes. Depending on the terrain shape, beaches can be short or very long and wide (as seen in the screenshot). Clay can be found in the sand and form in small to medium-sized blobs underwater. Beaches are generated based on height and noise; they technically form independent of the water of oceans. This effect can be noted if the water level (with the setting `water_level`) has been reduced.



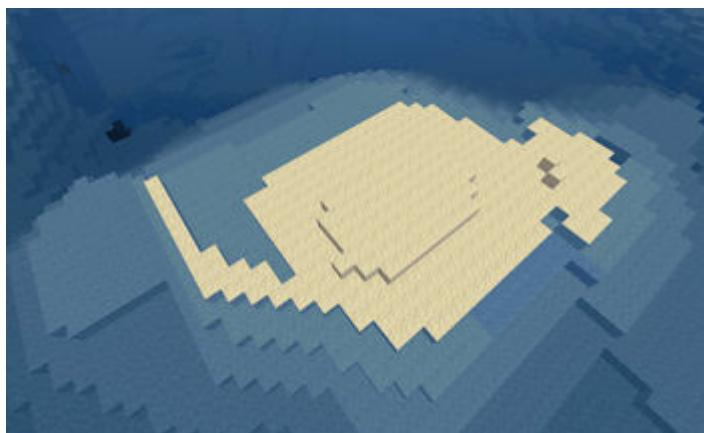
### Ocean

This biome is just a large body of water that can be up to 250 blocks deep. Oceans are commonly referred to as lakes, but are called oceans because they can be so huge, sometimes even 200-350 blocks across. The natural ocean floor is dirt, but sand is also common because of the beach biomes.



## Island

Not classifiable as a biome, but still frequent enough to be classified as a technical biome, islands occur many times in oceans. These could even be referred to as a sub-biome, being a product of another biome. Islands usually raise out of the ground 3-10 blocks, but can get as large as 40-80 blocks tall.



## Mountain

Mountains are the most treacherous to scale. Trees and apple trees spawn here naturally. It is quite easy to be killed in a mountain biome if you don't pay attention to where you are going.



## Plateau

A giant structure, plateaus are very common around mountain biomes as well as deserts. Plateaus can even float above ground and generate miniature biomes on top of it.



### Water caves

Water caves are caves that only occur at sea level, which turn into a huge underground river or lake. These caves can lead thousands of blocks down and are extremely easily to get lost in.



## Basic Controls

Most of these can be changed in the "Change Keys" menu. The default and most important controls are:

Control	Description
W/A/S/D	move
Space	jump
Left mouse button	Punch, mine blocks, move an item stack in an inventory
Right mouse button	use (e.g. open chest or furnace), place blocks, move one item or split items in an inventory
Shift+Right mouse button	place blocks
Middle mouse button	move 10 items in an inventory
Mouse wheel	select item in the hotbar
0-9	select item in the hotbar
Q	drop block, item or tool in hand
I	open or close the inventory menu

Control	Description
T	open the chat window
Strg	descend on ladders or sneak (walk slower, prevents falling off ledges)
F9	Cycle through minimap modes
Shift + F9	Change minimap orientation
F12	Take screenshot
Esc	Pause menu/abort/exit (pauses only singleplayer game)

## Using blocks/items

Using refers to a specific activity with a block. The kind of activity depends on the block. Not all blocks can be used. By default, using is done by clicking with the right mouse button on the block that shall be used.

By using, you can:

- open and close Doors, Trapdoors and Fence Gates,
- access a Chest's, Locked Chest's or Bones' inventory,
- access a Furnace's menu,
- access a Sign's menu to edit its text,
- access a Book's menu to edit its text,
- access the inventory of a Bookshelf or Vessels Shelf,
- skip the night by sleeping in a Simple Bed or Fancy Bed,
- make fire with Flint and Steel,
- eat food, such as Apples or Bread.



## Taking

You can take items from an occupied slot if the cursor holds nothing.

- Left click: take entire item stack
- Right click: take half from the item stack (rounding up if uneven)
- Middle click: take 10 items from the item stack

## Dropping

You can drop items onto a slot if the cursor holds 1 or more items and the slot is either empty or contains an item stack of the same item type.

- Left click: drop entire item stack
- Right click: drop 1 item of the item stack
- Middle click: drop 10 items of the item stack

## Exchanging

You can exchange items if the cursor holds 1 or more items and the destination slot is occupied by a different item type.

- Left, middle and right click: exchange item stacks from cursor and from selected item slot

## Throwing away

If you hold an item stack and click with it somewhere outside the menu, the item stack gets thrown away into the environment.

## Automatic Transfer

You can automatically transfer an item stack to/from the player inventory to/from another item's inventory slot like a furnace, chest, or any other item with an inventory slot when that item's inventory is accessed. When transferring items to/from the furnace, items that can be smelted will automatically go to the input slot. Items in the furnace output slot will automatically go to the player inventory.

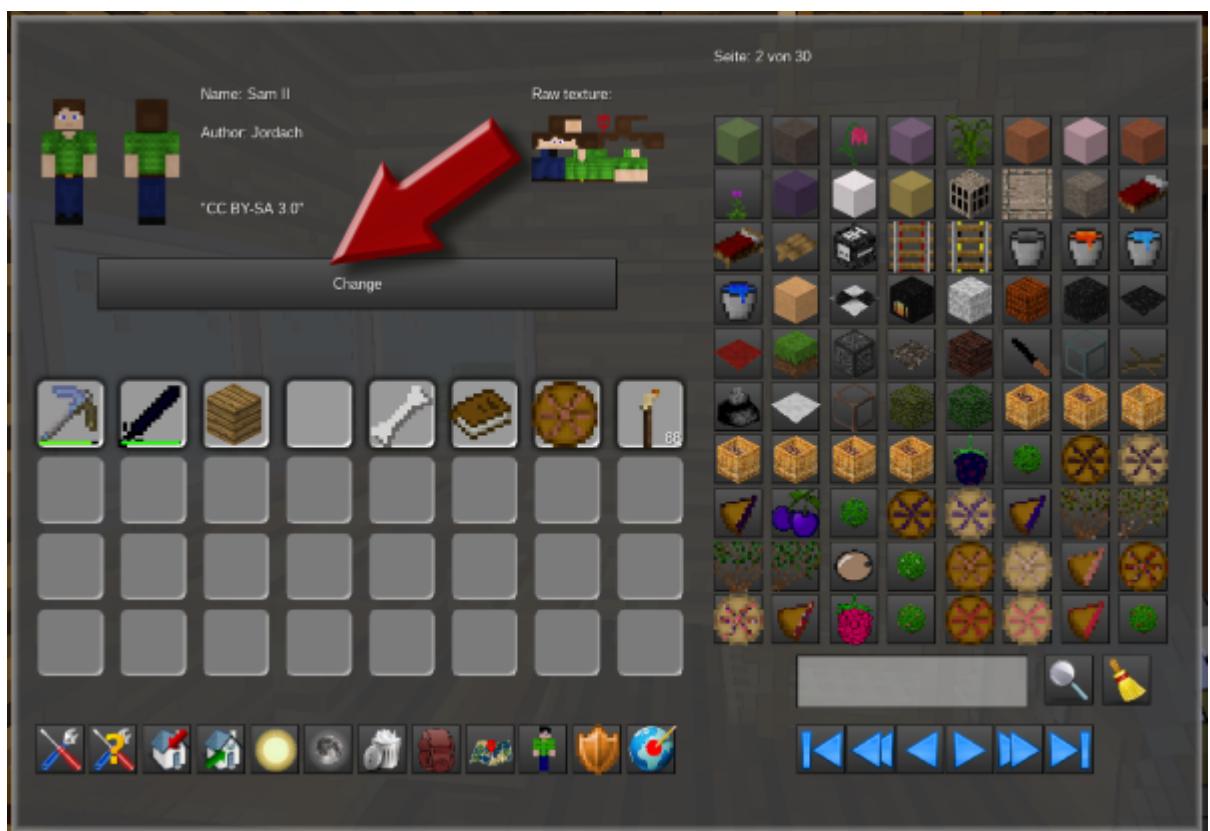
- Shift+Left click: Automatically transfer item stack.

# Changing your skin

If you want to change the default skin, you can do this in your inventory. Just click on the "Skin"-button below.



You see your current skin. Now click on "Change".



Choose your desired skin.



Congratulations! Press 'F7' to switch in third person mode to see your new skin!



# Crafting

## Crafting grid and output slot

To be able to craft anything at all, you need a crafting grid. A crafting grid consists of a number of inventory slots and you can place and move and remove items from it like you can with an inventory. To craft, the items have to be arranged somehow in the crafting grid. Next to a crafting

grid there is one output slot, in which the craft appears if you arranged the items in a valid way. Click on this symbol with the left mouse button to make this craft once. The needed items in the crafting grid will be used up. Click on the output slot with the middle mouse button to make this craft up to ten times (depending on how much items are left in the crafting grid). Crafting generally takes no time and you can use the resulting items immediately.

Crafting grids generally work like inventories. So a crafting grid found in your inventory menu can be used/abused as an extension of the player inventory.



## Shaped and shapeless recipes

There are two kinds of crafting recipes, *shaped ones* and *shapeless ones*.

For a shaped recipe, the items have to be arranged into an exact pattern. If a crafting recipe takes up a smaller rectangle than the crafting grid, it can be moved on any part of the crafting grid. For example, a 2x2 recipe can be arranged on the top left, top right, bottom left or bottom right on a 3x3 crafting grid. If a crafting recipe uses more space than available in the crafting grid, you are unable to craft this item with it. You need a larger one.

For a *shapeless recipe*, the necessary items just have to be placed on any available slots of the crafting grid. Stacking items does not work, however.

Most crafting recipes are *shaped recipes*. If not noted otherwise, it is assumed that a crafting recipe is shaped.

## Example recipes

### Shapeless recipes

Item	Ingredients	Grid
Bronze Ingot	Steel Ingot + Copper ingot	
Bronze Ingot	Steel Ingot + Copper ingot	
Bronze Ingot	Steel Ingot + Copper ingot	

## Shaped recipes

Item	Ingredients	Grid
Paper Papyrus		
Paper Papyrus		

Item	Ingredients	Grid
Paper Papyrus		

## Smelting

### Fuel

Block	Burning time in seconds	Items smelted for fuel
	Coal Block 370	123□
	Lava Bucket 60	20
	Coal Lump 40	13□
	Jungle Tree 38	12□
	Acacia Tree 34	11□
	Tree 30	10
	Pine Tree 26	8□
	Aspen Tree 22	7□
	Cactus 15	5

And many more...

### Recipes

Input	Output	Smelting time	Description
		15s	Can be eaten to restore health.

Input	Output	Smelting time	Description	
		Stone	3s	Used as decoration.
		Stone	3s	Used as decoration.
		Desert Stone	3s	Used as decoration.
		Clay Brick	3s	Used to craft bricks.
		Copper Ingot	3s	Can be combined with a steel ingot to make a bronze ingot.
		Gold Ingot	3s	Used for crafting Gold Block and Skeleton Key.
		Gold Ingot	5s	Used for crafting Gold Block and Skeleton Key.
		Steel Ingot	3s	Used for crafting several items.
		Steel Ingot	3s	Used for crafting several items.
		Glass	3s	Used as decoration or a building material.
		Glass	3s	Used as decoration or a building material.
		Obsidian Glass	3s	Used as decoration or a building material.

And many more...

## Mobs

### Simple mobs

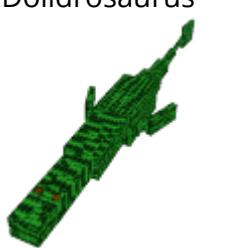
A few simple creatures in Stonecraft, not all are bad.

Mob	Description	Health/Armor/Damage	Drops
Zombie	Zombies can spawn at every time of day in the world as long there is not too much light. So you will find some in caves, dark forests and of course a lot at night. If they notice you they will attack. Zombies have 20 HP (like players) and drop sometimes rotten flesh on death. On day Zombies die because of the sunlight.	20  / -  / -	Rotten flesh
Ghost	Ghosts only spawn at night-time and they don't spawn underground. They are flying in the world and attack you as well if they notice you. Ghosts have 15 HP and don't drop any items atm (might be changed in future). They can't harm you in your house. If it becomes day Ghosts will take damage by the sunlight, so they will die after a while.	15  / -  / -	-
Sheep	Sheep spawn only at day-time and are friendly mobs. They remain around 5 minutes in the world unless they are tamed with 5 wheat (rightclick). There are four different wool colors: white, grey, brown and black. If there is grass (dirt with grass) they eat the grass and make new wool that way. Sheep have 8 HP and drop 1-2 wool when punched or sheared with shears. They need to eat grass until they can give wool again.	8  / -  / -	1-2 wool
Chicken	Chickens are friendly and spawn only at day-time too. They drop randomly eggs and remain 5 minutes. Currently you can't tame or breed them. They drop chicken meat and feather(s) on death. Eggs can be thrown to spawn (rarely) new chicken, or cooked in furnace to gain fried eggs, which are eatable.	-  / -  / -	Chicken meat Feather(s)
Oerrki	Oerrki spawn only at night on stone or dirt like blocks. They attack players and make more damage than Zombies or Ghosts. Daylight can't harm them.	-  / -  / -	-

## Not So Simple Mobs

**Not So Simple Mobs** are more complex mobs in Stonecraft, for the purpose of increasing the difficulty of playing. There are more than 50 different mobs. They are divided in groups, each one who lives in a different biome.

They all drop life energies. With life energies you can craft tools and special powerful weapons to defend yourself from the monsters.

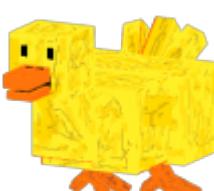
Mob	Description	Health/Armor/Damage	Drops
Black Widow	 <p>A black widow is a hostile medium sized spider with a big abdomen. They attack with small but powerful chelicerae.</p>	10 ❤️/- 💧/1½ ❤️	Life Energy Spider Leg Web
Stone Bloco	 <p>A Bloco is a hostile mob made of stone with a little head, short arms and legs. Bloco Is a little clumsy in walking and he chases his enemies rolling like a ball, a cubic ball obviously!</p> <p>He is a true Rolling Stones fan.</p>	7½ ❤️/4 💧/1 ❤️	Life Energy Stone
Crab	 <p>Crab is a hostile mob that lives on the beach and they don't float in water, they prefer walking on the sand pinching their enemies with their powerful chelas. Crabs have two possible colors of their carapace, red and light orange.</p>	17 ❤️/- 💧/1½ ❤️	Life Energy Surimi Crab Chela
Crocodile	 <p>A Crocodile is a hostile mob.</p>	10 ❤️/1 💧/1½ ❤️	Life Energy Crocodile Tail
Daddy Long Legs	 <p>A Daddy Long Legs is a spiderlike hostile mob with a small body and obviously, long legs!</p>	9½ ❤️/- 💧/1½ ❤️	Life Energy Spider Leg
Dolidrosaurus	 <p>A Dolidrosaurus is an aquatic reptile hostile mob with a long tail and a fin at the end. They're fully adapted to living in water and they have two others fins on the side which allow them to swim faster and more precisely. Dolidrosaurus derives from greek, Dolichos means long, Hydor water and Sauros lizard. Dolidrosauruses have five possible variations of their skin: Dark green, green, light green, blue-green and blue-pink.</p>	13 ❤️/2 💧/2 ❤️	Life Energy

Mob	Description	Health/Armor/Damage	Drops
Duck	A Duck is cute but evil hostile mob. Walks around the plains with nothing better to do than pecking the players foot. It is quite small and can survive Minetest cruel world only with the help of her big brothers and sisters that attack the bad players who wants to eat their delicious duck legs.	5  / -  / $\frac{1}{2}$	Life Energy Duck Legs Duck Beak
Echidna	An Echidna is a beautiful human hostile mob. Its skin is pale, sick-green and they have black hair. They're half naked but you probably won't care, the one who loses himself in those evil, but beautiful, eyes is dead. When you are to close she will slash you with her tail. She emits poison to blocks nearby which does not go away, it causes half heart of damage each game tick and you can drown in it like you would in water.	45  / 4  / 5	Life Energy Snake Scute
Enderduck	An Enderduck is tall and very dark hostile mob that spawns at night and hunts poor miners chasing them with high speed and brilliant eyes that allow them to see in the darker night.	10  / -  / $1\frac{1}{2}$	Life Energy Duck Legs Duck Beak
Felucco	The Felucco is one of the most fierce carnivores of nssm. It is very fast and attacks anyone with its mighty horns. His name derives from Italian: "fel" stands for "felino", feline, because of its similarity with leopards. "ucc" stands for "mucca", cow, because of his peculiar horns and "o" is the desinence for male in Italian.	16  / 3  / $2\frac{1}{2}$	Life Energy Felucco Fur Felucco Steak Felucco Horn
Giant Sandworm	With the fur it is possible to craft a strong armor, but not so durable. Felucco steaks are very nutritious after been cooked. Felucco horns are good raw materials to craft weapons and tools, it is possible to craft a hoe, a knife and a spear.		
	A Giant Sandworm is a huge hostile mob that likes to stay in one place and damages players when they get within a 7 block range.	65  / 4  / 4	Life Energy Worm Flesh Black Sand

Mob	Description	Health/Armor/Damage	Drops
Icelamander	<p>The Icelamander is the boss of ice biomes. Nearly nothing could defeat this dangerous mob. Taller than a normal Sam, the Icelamanders have even more frightening jaws than Snow Biters! They have a long tail that helps them to keep the balance on their two legs. The Icelamanders are so cold that they frost everything while walking, not only water! Their frosting power is so strong that they can freeze you in an ice column even from a great distance! Not the simple default ice, but the Coldest Ice, so cold that can freeze the souls of the unlucky creatures trapped in it.</p> <p>Icelamander eats their with their horrible fangs that can damage really bad their preys. You have now certainly understood that Icelamanders are really really dangerous.</p>	230  / 6  / 6	Life Energy Ice Tooth Little Ice Tooth Frosted Amphibian Heart Amphibian Ribs
Icesnake	<p>An Icesnake is an amphibian that live in ice plains and mountains. Long ago its body has been adapted to cold biomes using ice and cold in order to preserve the water content in cells. In fact the heat produced by the frosting of ice in the environment allows the Icesnake and the others ice amphibians as Snow Biters, Icelamanders and Icelizards to keep in the liquid form their body fluids.</p> <p>Icesnakes aren't very big or evil but they attack enemies with their fangs very rapidly.</p>	13½  / 3  / 2	Life Energy Ice Tooth Little Ice Tooth Frosted Amphibian Heart Amphibian Ribs
Kraken	<p>A Kraken is the king of the sea hostile gigantic octopus mob with long tentacles. There attack with tentacles is devastating but there dimensions doesn't allow them to go fast. Females are red-rose as Octpuses, on the other side the males are dark green. Kraken can produce ink in the water which make seeing in water even more difficult.</p>	75  / 3  / 4	Life Energy Tentacle Tentacle Curly
Larva	<p>A Larva is a hostile mob. It is the first stadium of Mantis and Mantis Beasts development. Their body is white and the head is brown. After around half a minute they become Mantis or Mantis Beasts! So be careful and slay all of them before it is too late.</p>	5  / -  / ½	Life Energy

Mob	Description	Health/Armor/Damage	Drops
Lava Titan	<p>A Lava Titan is a hostile mob that turns nearby blocks into lava and has two attack styles.</p> <ul style="list-style-type: none"> <li>- Lava titan hits the ground with his fist, kneels and summons lava blocks diagonaly around players.</li> <li>- Lava titan marches straight toward you rushing through blocks and destroying every block he touches.</li> </ul>	40  / 6  / 3½	Life Energy Lava Bucket Lava Titan Eye
Manticore	<p>A Manticore is a strong, fast hostile mob. It attacks either with projectiles from a far or with the scorpion sting on it's tail when you're too near.</p> <p><b>Appearance</b>            With face like a man's, a skin red as cinnabar, and is as large as a lion. It has three rows of teeth, ears and light-blue eyes like those of a man; its tail is like that of a land scorpion, containing a sting more than a cubit long at the end. It has other stings on each side of its tail.         </p>	12½  / -  / 2	Life Energy Manticore Spine
Mantis	<p>A Mantis is a tall and humanlike hostile mob that has two possible colors and attacks with two powerful kung fu moves with its 4 arms! It walks on two legs looking for fresh meat: you!</p>	7½  / -  / 1	Life Energy Mantis Claw
Mantis Beast	<p>A Mantis Beast is a hostile mob that is Very similar to their relatives that walk on only two legs, Mantis Beasts are faster thanks to their 6 claws used in running and their position is more "beastly"!</p>	10  / -  / 1½	Life Energy Mantis Claw
Masticone	<p>A Masticone is a hostile mob that alone isn't a real danger, but when you kill one of them two others come to venge their friend. Kill as many as you can then run as fast as you can!</p>	7½  / 4  / 2½	Life Energy Masticone Fang Masticone Skull Fragments
Mese Dragon	<p>A Mese Dragon is a massive hostile boss mob with midas touch that turns nearby blocks into mese blocks and has melee and firebreath attack. Mese dragon is not damaged by sunlight, water or lava.</p>	166½  / 4  / 8	Energy Globe Rainbow Staff

Mob	Description	Health/Armor/Damage	Drops
Night Master	A Night Master is a hostile mob that is a special kind of Moonheron that has three heads.	15 <span style="color:red">♥</span> /3 <span style="color:gray">▢</span> /4 <span style="color:red">♥</span>	Life Energy Heron Leg Night Feather
Octopus	An octopus is a hostile mob that is weaker brother of Kraken, they're not able to produce ink and they are all red-rose.	11 <span style="color:red">♥</span> /- <span style="color:gray">▢</span> /1½ <span style="color:red">♥</span>	Life Energy Tentacle
Phoenix	A Phoenix is a hostile mob made of fire and energy. Nobody, unless the sun, is brighter than this beatiful bird in the sky.	30 <span style="color:red">♥</span> /4 <span style="color:gray">▢</span> /1 <span style="color:red">♥</span>	Life Energy Sun Feather Phoenix Tear Phoenix Nuggets
Pumpking	A Pumpking is a hostile mob king of the pumbooms it is tall creepy creature with a humanlike black thin bodies covered with the blood of their victims, their head is very similar to a Pumpboom and their body to Signosigno. On their death they have a little explosive surprise for the unlucky warrior able enough to defeat them...	50 <span style="color:red">♥</span> /5 <span style="color:gray">▢</span> /4½ <span style="color:red">♥</span>	Life Energy Cursed Pumpkin Seed
Scrausics	A scrausics is a hostile mob.	15 <span style="color:red">♥</span> /2 <span style="color:gray">▢</span> /2 <span style="color:red">♥</span>	Life Energy Raw Scrausics Wing
Snowbiter	A Snow Biter is a hostile mob.	15 <span style="color:red">♥</span> /2 <span style="color:gray">▢</span> /2 <span style="color:red">♥</span>	Life Energy Frosted Amphibian Heart Amphibian Ribs Little Ice Tooth

Mob	Description	Health/Armor/Damage	Drops	
	Spiderducks have evolved from Enderducks to become more similar to the spiders. They have a dark skin and 8 legs, but the body is the one of a duck.			
Spiderduck	<p>Even if they are not bosses they are extremely dangerous! In fact if you don't know what to expect from a spiderduck you can easily fall in its web and become a tasteful snack! Spiderducks spawn only at night and because of their dark color they are able to easily blend with the environment. If a spiderduck sees you it starts shooting at you web projectiles. When they hit the target a sticky web covers the soil trapping the victims. And if you have been trapped then expect the spiderduck to come at you and to eat you!</p> 	24-35  / 2  / 6	Duck legs Life Energy Web Duck beak	
Stone Eater	A Stone Eater is a hostile mob that is immune to any sword weapon. When under attack he bites back while eating stone that is around.	14  / 6  / 2½	Life Energy Stoneater Mandible Stone	
Swimming Duck		A Swimming Duck is a hostile mob.	12½  / 2  / 1½	Life Energy Duck Legs Duck Beak Duck Feather
Tarantula		A Tarantula is a hostile mob that can either bite or slow down your movement trapping you inside a cocoon. After killing it Tarantula Propower appears.	25  / 4  / 4	Super Silk Gland
Mordain		A Mordain is a hostile mob that likes teleporting.	16  / 2  / 3	Life Energy Slothful Soul Fragment

Mob	Description	Health/Armor/Damage	Drops
Morde	 A Morde is a hostile mob that has an ability to heal himself.	23½ ❤️/4 💎/3 ❤️	Life Energy Proud Soul Fragment
Morgre	 A Morgre is a hostile mob that likes to explode.	17 ❤️/4 💎/½ ❤️	Life Energy Greedy Soul Fragment
Morgut	 Dont let it get to close to you or else it will steal your precious food. You can get your food back by slaying Morgut.  With the Gluttonous soul fragment it is possible to craft a strong weapon Sword of Gluttony and Food Bomb	18 ❤️/3 💎/2 ❤️	Life Energy Gluttonous soul fragment
Morlu	 Dont let it get to close to you or else it will steal your precious equipped armor. You can get your armor back by slaying Morlu.  With the Lustful Soul Fragment it is possible to craft strong Morlu armor and Cage Bomb	28 ❤️/5 💎/4 ❤️	Life Energy Wrathful Soul Fragment
Morvy	 A Morvy is a hostile mob that likes summoning.	19½ ❤️/4 💎/2 ❤️	Life Energy Envious Soul Fragment
Morwa	 A Morwa is a hostile mob that can either range you from afar or smash you when your close enough.	28 ❤️/5 💎/4 ❤️	Life Energy Wrathful Soul Fragment

## Farming

Farmable blocks will spawn either new blocks or yield new items, when mined. All farmable blocks

have to be on top of another certain kind of block to grow. Some farmable blocks also need light. The "Maximum profit" column shows the maximum possible outcome a single block will yield, including itself. Please notice: Light level 13 on a farmable crop cannot be achieved at night!

Block	Grows on	Needs light?	Maximum profit	Theoretical growth speed (evolution)	Expected growth speed (full)	Number of growth stages
 Cotton (plant)	Wet Soil, Wet Desert Sand Soil	Yes, 13 or higher	3  Strings and 3 Cotton Seeds	1/2 chance to grow every 80 seconds = about 160 seconds per stage	$160 \times 7 = 1120$ seconds ≈ 19 minutes	
 Wheat (plant)	Wet Soil	Yes, 13 or higher	2  Wheat (items) and 2  Wheat Seeds	1/2 chance to grow every 90 seconds = about 180 seconds per stage	$180 \times 7 = 1260$ seconds ≈ 21 minutes	
 Jungle Sapling	Dirt, Dirt with Grass, Dirt with Grass and Footsteps, Dirt with Dry Grass, Dirt with Snow, Soil, Wet Soil, Desert Sand Soil, Wet Desert Sand Soil	No	About 20 Jungle Trees and many  Jungle Leaves	1/50 chance every 10 seconds	$10 \times 50 = 500$ seconds ≈ 8 2 minutes	
 Sapling	Dirt, Dirt with Grass, Dirt with Grass and Footsteps, Dirt with Dry Grass, Dirt with Snow, Soil, Wet Soil, Desert Sand Soil, Wet Desert Sand Soil	No	5  Trees, many  Leaves and some  Apples	1/50 chance every 10 seconds	$10 \times 50 = 500$ seconds ≈ 8 2 minutes	
 Acacia Sapling	Dirt, Dirt with Grass, Dirt with Grass and Footsteps, Dirt with Dry Grass, Dirt with Snow, Soil, Wet Soil, Desert Sand Soil, Wet Desert Sand Soil	No	13  Acacia Trees and ca. 75  Acacia Leaves	1/50 chance every 10 seconds	$10 \times 50 = 500$ seconds ≈ 8 2 minutes	

Block	Grows on	Needs light?	Maximum profit	Theoretical growth speed (evolution)	Expected growth speed (full)	Number of growth stages
 Pine Sapling	Dirt, Dirt with Grass, Dirt with Grass and Footsteps, Dirt with Dry Grass, Dirt with Snow, Soil, Wet Soil, Desert Sand Soil, Wet Desert Sand Soil	No	Some Pine Trees and many Pine Needles	1/50 chance every 10 seconds	$10 \times 50 = 500$ seconds $\approx 8$ minutes	2
 Cactus	Any kind of sand	No	4  Cacti	1/20 chance every 50 seconds	$50 \times 20 = 1000$ seconds $\approx 17$ minutes	4
 Papyrus	Dirt, Dirt with Grass. (Water must be to 3 blocks away)	No	4  Papyri	1/20 chance every 50 seconds	$50 \times 20 = 1000$ seconds $\approx 17$ minutes	4
Group:flora	Dirt with Grass	Yes, 13 or higher	4 flora blocks of the same kind	1/25 chance every 50 seconds	$50 \times 25 = 1250$ seconds $\approx 21$ minutes	1
Group:flora	Desert Sand	No	1  Dry Shrub	1/25 chance every 50 seconds	$50 \times 25 = 1250$ seconds $\approx 21$ minutes	1

## Chat

The in-game chat functionality allows players to communicate with each other with short text messages inside a server.

### Sending messages

First of all, before you can chat anything at all, you require the "shout" privilege. Don't worry, most servers give you this privilege by default.

You can chat either by opening the chat window or the console which can be opened with the keys T or F10, respectively (assuming you use the default key bindings). Use the chat window or the console to enter a chat message. There are two kinds of chat messages, public ones and private ones.

#### Public messages

A public message is a message which is visible to all connected players.

#### Ordinary public messages

Your chat message is a normal public message if it doesn't begin with a "/". It appears like this in the chat log:

```
<player> message
```

Example: If you enter "Hello, how are you?" as MrCerealGuy, then this will appear in the chat log:

```
<MrCerealGuy> Hello, how are you?
```

### /me messages

This function is more like a gimmick than anything else. A /me message is a special case of a public message. The only real difference from the ordinary one is its appearance in the chat log. A /me message can be entered with:

```
/me <message>
```

Replace "<message>" with the actual message. You will get a message in the chat log which looks like this:

```
* <player> <message>
```

Example: Assume you want to say that you think that Stonecraft is awesome, in the third person. If you enter "/me thinks Stonecraft is awesome.", you get:

```
* MrCerealGuy thinks Stonecraft is awesome.
```

### Private messages

A private message is a chat message which appears only on the chat logs of the sender and a chosen receiver of the message.

You can send a private message (PM) to someone by using the "/msg" server command. Say something in the form of:

```
/msg <player> <message>
```

Replace "<message>" by your actual message and "<player>" by the name of the player you want to send the message to. The message won't be publicly visible in the chatlog and only appears to you and the other player. Be aware that the messages are not encrypted, so do not transfer really sensitive information using the private message feature.

Example: If your name is "MrCerealGuy" and you entered "/msg MrFr33maN I want to show you my hidden chest.", then this will appear in the chat log of MrFr33maN:

```
PM from MrCerealGuy: I want to show you my hidden chest.
```

## Experienced players

### Area protection

To protect your area from griefing by other player, choose the first corner on the ground of your area you want to protect. Then open the console with F10 and set the marker with `/area_pos1`.



Now select the second corner in opposite direction of the first corner above the ground and set the marker with the command `/area_pos2`.



Now it's time to protect your area with `/protect <description>`, eg. `/protect "My Home"`.

## Teleporters

A teleporter pad teleports players, or items to the linked receiver pad. A teleporter must be linked to a receiver first, before you can use it. One teleporter pad can only be linked to one receiver pad, you have to unlink it first, before using a new receiver. A receiver pad can accessed by many teleporter pads.

Example:

If you find an interesting location, then you can place a receiver pad.



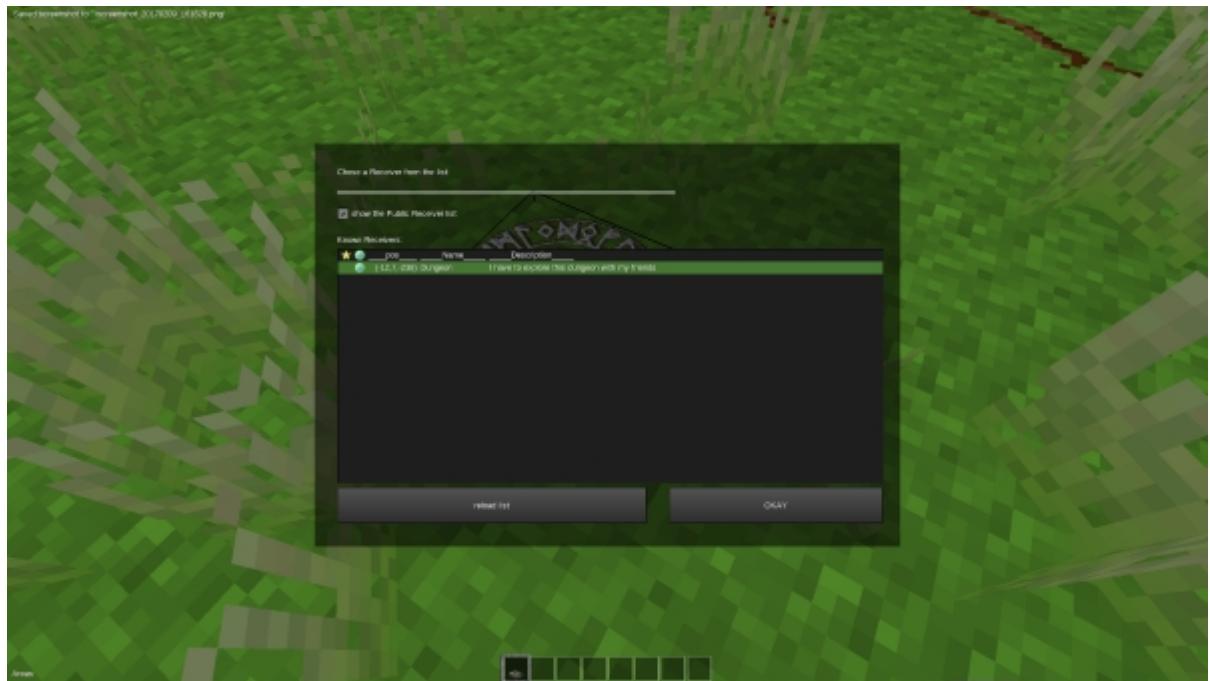
Do a right-click on the pad. You have enter a name and a optional description for your receiver pad.  
For servers you can make your receiver pad public for other players.



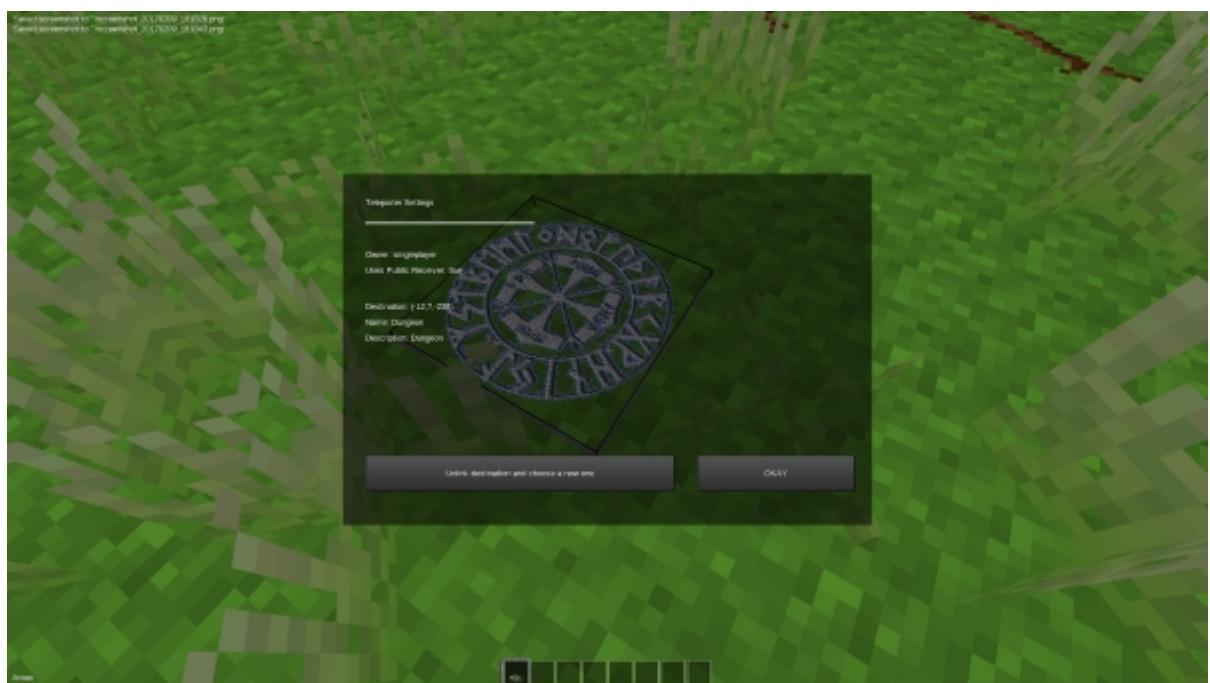
Now your receiver pad is placed. At home you can place a teleporter pad.



Do a right-click on the pad and select your receiver pad.



Now you have linked the teleporter with the receiver pad.



## Special Controls

You don't need these controls to play, but in special situations these controls can be useful.

Control	Description
Z	Zoom
/	Command
R	Enable/disable full range view
+	Increase view range
-	Decrease view range
K	Enable/disable fly mode (needs fly privilege)

Control	Description
J	Enable/disable fast mode (needs fast privilege)
H	Enable/disable noclip mode (needs noclip privilege)
F1	Hide/show HUD
F2	Hide/show chat
F3	Disable/enable fog
F4	Disable/enable camera update (Mapblocks are not updated anymore when disabled, disabled in release builds)
F5	Cycle through debug info screens
F6	Cycle through profiler info screens
F7	Cycle through camera modes
F8	Toggle cinematic mode
F10	Show/hide console
P	Write stack traces into debug.txt

## Server commands

Server commands are special commands to the server that can be entered by any player via the chat to cause the server to do something. There are a few commands which can be issued by everyone, but some commands only work if you have certain privileges granted on the server. Use "/privs" to see your own privileges. If not noted otherwise, the commands in this article are assumed to require no privileges.

### Issuing a command

To issue a command, simply type it like a chat message or use the console. Alternatively, you can just press the "/" key (only in default controls) which simply opens a chat window where the "/" has already been typed for you and then type the command right away. The command itself will not appear in the chat. Since every command starts with "/", this means that ordinary chat messages can't start with "/"; they will be interpreted as a command instead, even if such a command does not exist. You can tell whether or not a command was successful by the server's response. If you see something "-!- Invalid command: /blargh" in the chat, you probably misspelled something. The most commands will cause the server to write you something else on the chat log for you, if successful.

### General syntax

All commands start with "/". After that, one word follows which is itself followed by some or none arguments. You'll find the exact syntax in the command reference. In the following command reference, text enclosed in <> is a placeholder for an actual value. Anything written in [] can be omitted.

### Command reference of built-in commands

#### Quick documentation

Show short documentation of server commands and privileges; it will appear in the chat log, too. In case the help is too long, you can open the console with F10 to view everything again.

- **/help** - Shows a list of the available commands - depending on your privileges - on the server
- **/help <command>** - Shows short description about the given command. You can view the help of a command even if you do not have the privilege to issue it
- **/help all** - Lists the available commands - depending on your privileges - on the server and a short description and syntax reference to each one
- **/help privs** - Lists all privileges on the server that could possibly be granted to players and shows a short description about each of them

## Player-related Informational

- **/privs [<player>]** - List of privileges granted to <player>, if not specified, your own privileges
- **/last-login [<player>]** - Show the date and time when <player> has logged in the last time into this server (UTC time zone, ISO 8601 format). If not specified, shows your own last login time

## Chat

These commands require the "shout" privilege to work.

- **/msg <player> <message>** - Send a private message <message> to <player>
- **/me <action>** - Makes a text in the format "\* <your name> <action>" appear in the chat log. E.g. "/me eats pizza." leads to "\* Alfred eats pizza." (if your name is "Alfred")

## Items

For the /give and /giveme commands, a negative count will count down from 65536. This means for example that giving -1 of an itemstring will give 65535 items of that itemstring, which is also the hard size limit of a stack.

- **/giveme <itemstring> [<count>]** - Give certain item <count> times (default: 1) to yourself. For a list of items to use this with, see the Itemstrings page. Requires the "give" privilege
- **/give <player> <itemstring> [<count>]** - Give certain item <count> times (default: 1) to the player. Requires the "give" privilege
- **/pulverize** - Destroys the wielded item. Can be used by any player

## Teleportation

Teleportation is the immediate displacement of any player to a given position. All of the following commands require the "teleport" privilege

- **/teleport <x>,<y>,<z>** - Teleports yourself to given coordinates
- **/teleport <target\_player>** - Teleports yourself to the player with the name <target\_player>
- **/teleport <player> <x>,<y>,<z>** - Teleports <player> to given coordinates. Also requires the "bring" privilege

- **/teleport <player1> <player2>** - Teleports <player1> to <player2>. Also requires the "bring" privilege

## Moderation

### Password manipulation

These commands allow to set and reset the passwords of any player and require the "password" privilege to work.

- **/setpassword <player> <password>** - Sets password of <player> to <password>
- **/clearpassword <player>** - Makes password of <player> empty

### Privilege manipulation

All these commands require you to have the "privs" (to manipulate all privileges) or "basic\_privs" (to manipulate "interact" and "shout" privileges) privilege.

- **/grant <player> <privilege>** - Gives the <privilege> to <player>
- **/grant <player> all** - Give all available privileges to <player>
- **/grantme <privilege>** - Give <privilege> to yourself
- **/grantme all** - Gives all privilege to yourself
- **/revoke <player> <privilege>** - Takes away a <privilege> from <player>
- **/revoke <player> all** - Takes away as many privileges as possible from <player>

### Excluding players from server

These commands allow the user to kick, ban and unban players. Kicking a player means to remove a connected player from the server. This requires the "kick" privilege. Banning a player prevents him/her to connect to the server again. The player does not need to be connected at this time. Unbanning means to remove a ban from a player, allowing him/her to connect to the server again. The ban and unban commands require the "ban" privilege.

- **/kick <player name> [<reason>]** - Kicks the player with the name <player name>. Optionally a <reason> can be provided in text-form. This text is also shown to the kicked player.
- **/ban** - show list of banned players
- **/ban <player name>** - Ban IP of player
- **/unban <player name>** - Remove ban of player with the specified name
- **/unban <IP address>** - Remove ban of player with the specified IP address

## Server-related Informational

Request some information from the server; the answer from the server will also be written into the chatlog.

- **/admin** - Player name of the administrator / server operator of the server you're connected to.
- **/status** - Server's Stonecraft version, time the server is running in seconds (called "uptime"), list of

connected \* players and the message of the day (if it exists).

- **/mods** - List of mods installed on the server.
- **/days** - Current game day (counting starts at 0)
- **/time** - Current game time (24h clock)

## World manipulation

- **/time <hours>:<minutes>** - Sets the time of day in the 24-hour format (0:00-23:59). Requires the "settime" privilege
- **/time <time\_of\_day>** - Sets the time of day (tod) (number between 0 and 24000). 0 tod and 24000 tod are midnight, 12000 tod is noon, 18600 tod is sunset, 4750 tod is sunrise. (time of day = hour \* 1000). Requires the "settime" privilege
- **/set -n time\_speed <speed>** - Sets the speed of day/night cycle where <speed> is the time speed (read as "<speed> times faster than in real life"). 72 is the default, which means a day-night cycle lasts 20 minutes by default. Requires the "server" privilege
- **/spawnentity <entity> [<X>,<Y>,<Z>]** - Spawns an entity of type <entity> (see List of entity names) near your position or at the X,Y,Z coordinates, if specified. Requires "give" and "interact" privileges

## Server maintenance

All of these commands require the "server" privilege.

- **/shutdown** - Shuts down the server
- **/set <variable>** - Shows the value of the given server <variable>
- **/set <variable> <new value>** - Sets the existing server <variable> to the given <new value>
- **/set -n <variable> <initial value>** - Creates a new server variable named <variable> and sets it to <initial value>
- **/clearobjects [full|quick]** - Clears all objects/entities (removes all dropped items, mobs and possibly more). Note this may crash the server or slow it down to a crawl for 10 to more than 60 seconds
- **/auth\_reload** - Reloads auth.txt, which is the authentication data, containing privileges and Base64-scrambled passwords
- **/deleteblocks here [<radius>]** - Removes the MapBlock the player is in, from the database. As this triggers mapgen, this might start mechanisms like mud reflow or cavegen which very likely affect mapblocks outside the specified range. 113 blocks are a safe-distance for a server with no interfering mods. <radius> is an optional argument to specify the range in which MapBlocks are deleted
- **/deleteblocks <pos1> <pos2>** - Removes the MapBlock containing blocks inside the area from pos1 to pos2 from the database. May crash for larger areas. Warnings from above apply

## Rollback

Allows to use Rollback. Requires the "rollback" privilege.

- **/rollback\_check [<range>] [<seconds>]** - Checks who has last touched a node or near it, max.

- <seconds> ago (default <range>=0, default <seconds>=86400, which equals 24 hours in real time).
- **/rollback <player name> [<seconds>]** - Reverts actions of a player; default for <seconds> is 60
  - **/rollback :<actor name> [<seconds>]** - Reverts actions of an actor (not a player); default for <seconds> is 60

## Privileges

Every player has a set of privileges, which differ from server to server. Roughly spoken, one's privileges determine what one is able to do and what not. Each privilege has a name (the meaning is described below). Privileges can be granted and revoked from other players by any player who has the privilege called "*privs*". On a multiplayer server with a default configuration, new players start with the privileges called "interact", "shout" and "zoom". To view one's own privileges, one can issue the server command "*/privs*".

### Built-in privileges

gameplay-related: \* **interact** - build, mine or use blocks \* **give** - can use the /give and /giveme commands \* **zoom** - can zoom (Z key by default) \* **teleport** - can use the /teleport command to teleport oneself to certain coordinates or to another player \* **bring** - in combination with teleport, can use the /teleport command to teleport any player to certain coordinates or to yet another player \* **fast** - allows the player to activate fast mode \* **fly** - allows the player to activate fly mode \* **noclip** - allows the player to activate "noclip" mode, which allows them to fly through walls

chat-related: \* **shout** - can chat with other people

world-manipulation-related: \* **settime** - can set time of day using /time

moderation-related: \* **privs** - can set any privileges of players using /grant and /revoke \* **basic\_privs** - can set "interact" and "shout" privileges using /grant and /revoke \* **kick** - can kick players with /kick \* **ban** - can ban/unban IPs and names using /ban and /unban \* **rollback** - can use the rollback functionality \* **protection\_bypass** - can bypass protection of blocks (e.g. can open locked chests or steel doors of everyone)

administration-related: \* **server** - can do server maintenance stuff such as /shutdown, /clearobjects, /set, ... \* **debug** - can access advanced debug features and informations, such as the wireframe in the debug screens (F5)

### Privileges from mods

Mods may make additional privileges available on the server. Issue the server command */help privs* to receive a full list (and short descriptions) of all possible privileges on the server.

### Server configuration

Using the server's configuration files, a lot of privilege-related stuff can be manipulated.

There is an option in the configuration file for setting the default privileges for new players.

`default_privs = interact, shout, zoom`

The player having the name in the "name" field of the configuration has all the privileges. Privileges are stored in the `auth.txt` file. The format of every line in that file is `name:hashed_password:privs`. A real example: `mrcerealguy:CcCUjNUDVJxmXmTHj+7WKHvA9Ds:interact,shout,zoom`

The `auth.txt` file is written periodically and at shutdown, so you should edit it only when the server is not running.

## Create and import a schematic file (.mts)

How to create a schematic file:

1. Enter in your world (with WorldEdit enabled).
2. Grant yourself all privileges : `/grant singleplayer all`.
3. Press F5 to display the coordinates.
4. Select the area to export with : `//pos1` and `//pos2`.
5. Create your schematic file with : `//mtschemcreate <name of your schematic file>`. Without extension .mts.

Your schematic will appear into the `worlds/<my_world>/schemas` folder.

How to import a schematic file:

1. Enter in your world (with WorldEdit enabled).
2. Grant yourself all privileges : `/grant singleplayer all`.
3. Move a schematic file into the `worlds/<my_world>/schemas` folder.
4. Press F5 to display the coordinates.
5. Select a position with : `//pos1`
6. Import your schematic file from the chosen position with : `//mtschemplace <name of your schematic file>`. Without extension .mts.

## Setting up a server

1. Start your server on your desired port
  - **Note:** It is recommended to leave the port at the default (30000)
2. Find out your internal IP of the computer you are running the server on
  - **Linux:** open a terminal and type `ifconfig` and hit enter
  - **Windows:** `Start -> Run ... -> cmd.exe -> ipconfig`
3. Check the port forwarding settings on your router
  - forward your chosen port for UDP (30000 if you left it default) to the internal IP
  - In addition, alter any firewalls you may have to pass the traffic at that port
4. Let your friends know your external IP
5. Make your server listed in the server list by setting the following settings in `stonecraft.conf`
  - `server_announce = true` - makes Stonecraft tell the server list about the server.
  - `server_name` - set the value of this to your server's name.
  - `server_description` - set the value of this to a longer description describing your server.

- server\_address - if you have a domain name for your server, then set this to the domain name.
- server\_url - if you have a website for your server, then set this to the website URL.
- motd - a message that is sent to the player when they join. Use this to welcome them.
- You should restart the server to make sure any changed settings changed

## Running a dedicated server

### Linux

1. Open a terminal.
2. Type in <YOUR/STONECRAFT/DIRECTORY>/bin/stonecraftserver or just drop the stonecraftserver executable (located in /Stonecraft/bin/) into the terminal (**PLEASE READ THE NOTES BELOW!**)
  - If you want to specify a specific game ID, the game ID choices are located in /Stonecraft/games/. Add in --gameid *thegameid* to the end of the command.
  - If you get the error "Multiple worlds are available.", the world choices are located in /Stonecraft/worlds/. Add in --worldname *theWorld* to the end of the command.
3. If your server crashes, then look at the debug.txt in /Stonecraft/bin/
4. Enjoy running a Stonecraft server!

For easy use you can create a file named *start-stonecraft.sh*, add the lines below and put it in your /Stonecraft/bin/ folder.

```
#!/bin/bash -e

until ./stonecraftserver --worldname ../worlds/<YOUR-WORLD>; do
    echo "Server 'stonecraftserver' crashed with exit code $?. Respawning.." >&2
    sleep 1
done
```

You have to make the script executable with the command

```
chmod +x start-stonecraft.sh
```

To run the server, just execute the script in a terminal with

```
./start-stonecraft.sh
```

Tipp: Add the start script to your /etc/rc.local file to run Stonecraft automatically if your system is rebooting.

```
#!/bin/sh -e
#
# rc.local
#
# This script is executed at the end of each multiuser runlevel.
# Make sure that the script will "exit 0" on success or any other
```

```

# value on error.
#
# In order to enable or disable this script just change the execution
# bits.
#
# By default this script does nothing.

<YOUR/STONECRAFT/DIRECTORY>/bin/start-stonecraft.sh

exit 0

```

## Windows

1. Open command prompt by going in the */Stonecraft/bin/* folder, hold Shift, do a right click on *bin* and click "Open command window here".
2. Type this: *stonecraft.exe --server*.
  - If you get the error "Multiple worlds are available.", use *stonecraft.exe --server --worldname world\_name* instead, where *world\_name* is the name of the world.
3. If your server crashes, then look at the *debug.txt* in */Stonecraft/bin/*
4. Enjoy running a Stonecraft server!

If you don't like to start the crashed server, simply start the server out of a batch file which contains the following code:

```

@echo off
:crash
stonecraft.exe --server --worldname world_name
goto crash

```

## Modding Stonecraft

If you wish to make your own mod for Stonecraft, I recommend to learn how the engine works and to become familiar with the Lua API. The following links can be useful:

1. Learn the structure of the **Minetest engine** [http://dev.minetest.net/Main\\_Page](http://dev.minetest.net/Main_Page)
2. Learn the **Lua programming language** <https://www.lua.org/pil/contents.html>
3. Learn the **Lua Mod API** [http://rubenwardy.com/minetest\\_modding\\_book/](http://rubenwardy.com/minetest_modding_book/)

## Installing mods

You can get mods from the [Minetest community](#), I can give no warranties that they work with Stonecraft. The mods are installed globally and enabled per world.

The common place to install them is *<YOUR/STONECRAFT/DIRECTORY>/mods/*. After extracting the mod there you need to enable it for your world. This can either be done in the GUI by clicking on "Configure" in the world selection, or by adding

```
load_mod_<modname> = true
```

in the *world.mt* file in the world directory.

Note that newly installed mods are disabled for all worlds by default, so you explicitly need to enable them.

If you want to use a mod only in a specified world, then you have to extract your mod in *<YOUR/STONECRAFT/DIRECTORY>/worlds/<YOUR-WORLD>/worldmods/*.

## Installing texture packs

You will find a folder called *textures* in your Stonecraft base folder. Place the texture pack there. Start Stonecraft and select a new style in the *textures tab*.

### Server texture pack

If you create a server and want that the texture pack works not only for you, change the texture pack name to *server*.

## Profiling mods

To activate the profiler simple add to *stonecraft.conf* following line:

```
profiler.load = true
```

Start a game and make sure you have server privileges. Open the console and type

```
/profiler print
```

to get the current statistics.

Here you see the usage of the profiler command:

```
/profiler print [filter] | dump [filter] | save [format [filter]] | reset
```

Available save formats: txt, csv, lua, json, json\_pretty