

Entity metadata

Various **Entities** have different metadata fields and status codes.

These are the valid codes for Minecraft Java Edition 1.17; for upcoming snapshots, see Pre-release protocol#Entity Metadata.

Because this is always updated late, only valid for the latest version and not computer parseable, Bixilon wrote PixLyzer (<https://gitlab.bixilon.de/bixilon/pixlyzer>). Burger burger (<https://github.com/Pokechu22/Burger/tree/master>) might help.

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Mobs

Most entities are spawned via [Spawn Living Entity](#).

 Some entities (marked in yellow) should only be spawned using [Spawn Entity](#). Servers should not attempt to spawn these entities using [Spawn Living Entity](#) with that entity ID, although clients should accept such packets if they appear.

Additionally, a few other entities (marked in blue) must be spawned in their own special ways:

- [Painting](https://minecraft.fandom.com/wiki/Painting) (<https://minecraft.fandom.com/wiki/Painting>)s should be spawned using [Spawn Painting](#)
- XP orbs should be spawned using [Spawn Experience Orb](#).

Furthermore, the marker entity (marked in red) must not be spawned, as it is server-side only. Find out more about the marker [here](https://minecraft.fandom.com/wiki/Marker) (<https://minecraft.fandom.com/wiki/Marker>).

⚠ These entity IDs are up to date for 1.17. Use [Data Generators](#) or [Burger \(https://pokechu22.github.io/Burger/1.15.2.html\)](https://pokechu22.github.io/Burger/1.15.2.html) to get older IDs. If using Burger just replace the version number to what you want to see.

Type	Name	bounding box x and z	bounding box y	ID
0	Area Effect Cloud	2.0 * Radius	0.5	minecraft:area_effect_cloud
1	Armor Stand	normal: 0.5 marker: 0.0 small: 0.25	normal: 1.975 marker: 0.0 small: 0.9875	minecraft:armor_stand
2	Arrow	0.5	0.5	minecraft:arrow
3	Axolotl	1.3	0.6	minecraft:axolotl
4	Bat	0.5	0.9	minecraft:bat
5	Bee	0.7	0.6	minecraft:bee
6	Blaze	0.6	1.8	minecraft:blaze
7	Boat	1.375	0.5625	minecraft:boat
8	Cat	0.6	0.7	minecraft:cat
9	Cave Spider	0.7	0.5	minecraft:cave_spider
10	Chicken	0.4	0.7	minecraft:chicken
11	Cod	0.5	0.3	minecraft:cod
12	Cow	0.9	1.4	minecraft:cow
13	Creeper	0.6	1.7	minecraft:creeper
14	Dolphin	0.9	0.6	minecraft:dolphin
15	Donkey	1.5	1.39648	minecraft:donkey
16	Dragon Fireball	1.0	1.0	minecraft:dragon_fireball
17	Drowned	0.6	1.95	minecraft:drowned
18	Elder Guardian	1.9975 (2.35 * guardian)	1.9975 (2.35 * guardian)	minecraft:elder_guardian
19	End Crystal	2.0	2.0	minecraft:end_crystal
20	Ender Dragon	16.0	8.0	minecraft:ender_dragon
21	Enderman	0.6	2.9	minecraft:enderman
22	Endermite	0.4	0.3	minecraft:endermite
23	Evoker	0.6	1.95	minecraft:evoker
24	Evoker Fangs	0.5	0.8	minecraft:evoker_fangs
25	Experience Orb	0.5	0.5	minecraft:experience_orb
26	Eye of Ender	0.25	0.25	minecraft:eye_of_ender
27	Falling Block	0.98	0.98	minecraft:falling_block
28	Firework Rocket Entity	0.25	0.25	minecraft:firework_rocket
29	Fox	0.6	0.7	minecraft:fox
30	Ghast	4.0	4.0	minecraft:ghast
31	Giant	3.6	12.0	minecraft:giant
32	Glow Item Frame	0.75 or 0.0625 (depth)	0.75	minecraft:glow_item_frame
33	Glow Squid	0.8	0.8	minecraft:glow_squid
34	Goat	1.3 (adult), 0.65 (baby)	0.9 (adult), 0.45 (baby)	minecraft:goat

35	Guardian	0.85	0.85	minecraft:guardian
36	Hoglin	1.39648	1.4	minecraft:hoglin
37	Horse	1.39648	1.6	minecraft:horse
38	Husk	0.6	1.95	minecraft:husk
39	Illusioner	0.6	1.95	minecraft:illusioner
40	Iron Golem	1.4	2.7	minecraft:iron_golem
41	Item	0.25	0.25	minecraft:item
42	Item Frame	0.75 or 0.0625 (depth)	0.75	minecraft:item_frame
43	Fireball	1.0	1.0	minecraft:fireball
44	Leash Knot	0.375	0.5	minecraft:leash_knot
45	Lightning Bolt	0.0	0.0	minecraft:lightning_bolt
46	Llama	0.9	1.87	minecraft:llama
47	Llama Spit	0.25	0.25	minecraft:llama_spit
48	Magma Cube	0.51000005 * size	0.51000005 * size	minecraft:magma_cube
49	Marker	0.0	0.0	minecraft:marker
50	Minecart	0.98	0.7	minecraft:minecart
51	Minecart Chest	0.98	0.7	minecraft:chest_minecart
52	Minecart Command Block	0.98	0.7	minecraft:commandblock_minecart
53	Minecart Furnace	0.98	0.7	minecraft:furnace_minecart
54	Minecart Hopper	0.98	0.7	minecraft:hopper_minecart
55	Minecart Spawner	0.98	0.7	minecraft:spawner_minecart
56	Minecart TNT	0.98	0.7	minecraft:tnt_minecart
57	Mule	1.39648	1.6	minecraft:mule
58	Mooshroom	0.9	1.4	minecraft:mooshroom
59	Ocelot	0.6	0.7	minecraft:ocelot
60	Painting	type width or 0.0625 (depth)	type height	minecraft:painting
61	Panda	1.3	1.25	minecraft:panda
62	Parrot	0.5	0.9	minecraft:parrot
63	Phantom	0.9	0.5	minecraft:phantom
64	Pig	0.9	0.9	minecraft:pig
65	Piglin	0.6	1.95	minecraft:piglin
66	Piglin Brute	0.6	1.95	minecraft:piglin_brute
67	Pillager	0.6	1.95	minecraft:pillager
68	Polar Bear	1.4	1.4	minecraft:polar_bear
69	Primed TNT	0.98	0.98	minecraft:tnt
70	Pufferfish	0.7	0.7	minecraft:pufferfish

71	Rabbit	0.4	0.5	minecraft:rabbit
72	Ravager	1.95	2.2	minecraft:ravager
73	Salmon	0.7	0.4	minecraft:salmon
74	Sheep	0.9	1.3	minecraft:sheep
75	Shulker	1.0	1.0-2.0 (depending on peek)	minecraft:shulker
76	Shulker Bullet	0.3125	0.3125	minecraft:shulker_bullet
77	Silverfish	0.4	0.3	minecraft:silverfish
78	Skeleton	0.6	1.99	minecraft:skeleton
79	Skeleton Horse	1.39648	1.6	minecraft:skeleton_horse
80	Slime	0.51000005 * size	0.51000005 * size	minecraft:slime
81	Small Fireball	0.3125	0.3125	minecraft:small_fireball
82	Snow Golem	0.7	1.9	minecraft:snow_golem
83	Snowball	0.25	0.25	minecraft:snowball
84	Spectral Arrow	0.5	0.5	minecraft:spectral_arrow
85	Spider	1.4	0.9	minecraft:spider
86	Squid	0.8	0.8	minecraft:squid
87	Stray	0.6	1.99	minecraft:stray
88	Strider	0.9	1.7	minecraft:strider
89	Thrown Egg	0.25	0.25	minecraft:egg
90	Thrown Ender Pearl	0.25	0.25	minecraft:ender_pearl
91	Thrown Experience Bottle	0.25	0.25	minecraft:experience_bottle
92	Thrown Potion	0.25	0.25	minecraft:potion
93	Thrown Trident	0.5	0.5	minecraft:trident
94	Trader Llama	0.9	1.87	minecraft:trader_llama
95	Tropical Fish	0.5	0.4	minecraft:tropical_fish
96	Turtle	1.2	0.4	minecraft:turtle
97	Vex	0.4	0.8	minecraft:vex
98	Villager	0.6	1.95	minecraft:villager
99	Vindicator	0.6	1.95	minecraft:vindicator
100	Wandering Trader	0.6	1.95	minecraft:wandering_trader
101	Witch	0.6	1.95	minecraft:witch
102	Wither	0.9	3.5	minecraft:wither
103	Wither Skeleton	0.7	2.4	minecraft:wither_skeleton
104	Wither Skull	0.3125	0.3125	minecraft:wither_skull
105	Wolf	0.6	0.85	minecraft:wolf
106	Zoglin	1.39648	1.4	minecraft:zoglin
107	Zombie	0.6	1.95	minecraft:zombie

108	Zombie Horse	1.39648	1.6	minecraft:zombie_horse
109	Zombie Villager	0.6	1.95	minecraft:zombie_villager
110	Zombified Piglin	0.6	1.95	minecraft:zombified_piglin
111	Player	0.6	1.8	minecraft:player
112	Fishing Hook	0.25	0.25	minecraft:fishing_bobber

Entity Metadata Format

Note that entity metadata is a totally distinct concept from block metadata. It is not required to send all metadata fields, or even any metadata fields, so long as the terminating entry is correctly sent.

Entity Metadata is an array of entries, each of which looks like the following:

Name	Type	Meaning
Index	Unsigned Byte	Unique index key determining the meaning of the following value, see the table below. If this is 0xff then it is the end of the Entity Metadata array and no more is read.
Type	Optional VarInt Enum	Only if Index is not 0xff; the type of the index, see the table below
Value	Optional <i>value of Type</i>	Only if Index is not 0xff: the value of the metadata field

Value of Type field	Type of Value field	Notes
0	Byte	
1	VarInt	
2	Float	
3	String	
4	<u>Chat</u>	
5	OptChat (Boolean + Optional <u>Chat</u>)	<u>Chat</u> is present if the Boolean is set to true
6	<u>Slot</u>	
7	Boolean	
8	Rotation	3 floats: rotation on x, rotation on y, rotation on z
9	<u>Position</u>	
10	OptPosition (Boolean + Optional Position)	Position is present if the Boolean is set to true
11	Direction (VarInt)	(Down = 0, Up = 1, North = 2, South = 3, West = 4, East = 5)
12	OptUUID (Boolean + Optional UUID)	UUID is present if the Boolean is set to true
13	OptBlockID (VarInt)	0 for absent (implies air); otherwise, a block state ID as per the global palette
14	<u>NBT</u>	
15	<u>Particle</u>	
16	Villager Data	3 VarInts: villager type, villager profession, level
17	OptVarInt	0 for absent; 1 + actual value otherwise. Used for entity IDs.
18	Pose	A VarInt enum: 0: STANDING, 1: FALL_FLYING, 2: SLEEPING, 3: SWIMMING, 4: SPIN_ATTACK, 5: SNEAKING, 6: LONG_JUMPING, 7: DYING

Villager type (minecraft:villager_type registry):

Name	ID
minecraft:desert	0
minecraft:jungle	1
minecraft:plains	2
minecraft:savanna	3
minecraft:snow	4
minecraft:swamp	5
minecraft:taiga	6

Villager professions (minecraft:villager_profession registry):

Name	ID
minecraft:none	0
minecraft:armorer	1
minecraft:butcher	2
minecraft:cartographer	3
minecraft:cleric	4
minecraft:farmer	5
minecraft:fisherman	6
minecraft:fletcher	7
minecraft:leatherworker	8
minecraft:librarian	9
minecraft:mason	10
minecraft:nitwit	11
minecraft:shepherd	12
minecraft:toolsmith	13
minecraft:weaponsmith	14

Entity classes also recursively inherit fields from classes they extend.

Entity

The base class.

Index	Type	Meaning		Default
0	Byte	Bit mask	Meaning	0
		0x01	Is on fire	
		0x02	Is crouching	
		0x04	Unused (previously riding)	
		0x08	Is sprinting	
		0x10	Is swimming	
		0x20	Is invisible	
		0x40	has glowing effect	
		0x80	Is flying with an <u>elytra</u> (https://minecraft.fandom.com/wiki/Elytra)	
1	VarInt	Air ticks		300
2	OptChat	Custom name		empty
3	Boolean	Is custom name visible		false
4	Boolean	Is silent		false
5	Boolean	Has no gravity		false
6	Pose	Pose		STANDING
7	VarInt	Ticks frozen in powdered snow		0

Freezing ticks cap at 140 in the client for the player's snow overlay when stuck in powder snow. If the entity extends LivingEntity and freezing ticks reaches the cap, the mob will start shaking (this excludes the skeleton, which has its own indicator).

Thrown Egg

Extends [Entity](#).

Index	Type	Meaning	Default
8	Slot	Item	Empty (which behaves as if it were a <code>minecraft:egg</code>)

Thrown Ender Pearl

Extends [Entity](#).

Index	Type	Meaning	Default
8	Slot	Item	Empty (which behaves as if it were a <code>minecraft:ender_pearl</code>)

Thrown Experience Bottle

Extends [Entity](#).

Index	Type	Meaning	Default
8	Slot	Item	Empty (which behaves as if it were a <code>minecraft:experience_bottle</code>)

Thrown Potion

Extends [Entity](#).

Index	Type	Meaning	Default
8	Slot	Potion which is thrown	Empty

Snowball

Extends [Entity](#).

Index	Type	Meaning	Default
8	Slot	Item	Empty (which behaves as if it were a <code>minecraft:snowball</code>)

Eye of Ender

Extends [Entity](#).

Index	Type	Meaning	Default
8	<u>Slot</u>	Item	Empty (which behaves as if it were a <code>minecraft:ender_eye</code>)

Falling Block

Extends Entity.

Index	Type	Meaning	Default
8	<u>BlockPos</u>	spawn position	(0, 0, 0)

Area Effect Cloud

Extends Entity.

Index	Type	Meaning	Default
8	Float	Radius	0.5
9	VarInt	Color (only for mob spell particle)	0
10	Boolean	Ignore radius and show effect as single point, not area	false
11	Particle	The <u>#Particle</u>	effect

Fishing Hook

Extends Entity.

Index	Type	Meaning	Default
8	VarInt	Hooked entity id + 1, or 0 if there is no hooked entity	0
9	Boolean	Is catchable	False

Abstract Arrow

Extends Entity.

Index	Type	Meaning		Default
8	Byte	Bit mask	Meaning	0
		0x01	Is critical	
		0x02	Is noclip (used by loyalty tridents when returning)	
9	Byte	Piercing level		0

Arrow

Extends Abstract Arrow.

Used for both tipped and regular arrows. If not tipped, then color is set to -1 and no tipped arrow particles are used.

Index	Type	Meaning	Default
10	VarInt	Color (-1 for no particles)	-1

Spectral Arrow

Extends [Abstract Arrow](#).

No additional metadata.

Thrown Trident

Extends [Abstract Arrow](#).

Index	Type	Meaning	Default
10	VarInt	Loyalty level (enchantment)	0
11	Boolean	Has enchantment glint	False

Boat

Extends [Entity](#).

Index	Type	Meaning	Default
8	VarInt	Time since last hit	0
9	VarInt	Forward direction	1
10	Float	Damage taken	0.0
11	VarInt	Type (0=oak, 1=spruce, 2=birch, 3=jungle, 4=acacia, 5=dark oak)	0
12	Boolean	Is left paddle turning	false
13	Boolean	Is right paddle turning	false
14	VarInt	Splash timer	0

End Crystal

Extends [Entity](#).

Index	Type	Meaning	Default
8	OptBlockPos	Beam target	Empty
9	Boolean	Show bottom	true

Dragon Fireball

Extends [Entity](#).

No additional metadata.

Small Fireball

Extends [Entity](#).

This is the fireball shot by blazes and dispensers with fire charges.

Index	Type	Meaning	Default
8	<u>Slot</u>	Item	Empty (which behaves as if it were a <code>minecraft:fire_charge</code>)

Fireball

Extends Entity.

This is the large fireball shot by ghasts.

Index	Type	Meaning	Default
8	<u>Slot</u>	Item	Empty

Wither Skull

Extends Entity.

Index	Type	Meaning	Default
8	Boolean	Is invulnerable	false

Firework Rocket Entity

Extends Entity.

Index	Type	Meaning	Default
8	<u>Slot</u>	Firework info	Empty
9	OptVarInt	Entity ID of entity which used firework (for elytra boosting)	Empty
10	Boolean	Is shot at angle (from a crossbow)	false

Item Frame

Extends Entity.

Index	Type	Meaning	Default
8	<u>Slot</u>	Item	Empty
9	VarInt	Rotation	0

Item Entity

Extends Entity.

Index	Type	Meaning	Default
8	<u>Slot</u>	Item	Empty

Living Entity

Extends Entity.

Index	Type	Meaning		Default
8	Byte	Hand states, used to trigger blocking/eating/drinking animation.		0
		Bit mask	Meaning	
		0x01	Is hand active	
		0x02	Active hand (0 = main hand, 1 = offhand)	
		0x04	Is in riptide spin attack	
9	Float	Health		1.0
10	VarInt	Potion effect color (or 0 if there is no effect)		0
11	Boolean	Is potion effect ambient: reduces the number of particles generated by potions to 1/5 the normal amount		false
12	VarInt	Number of arrows in entity		0
13	VarInt	Number of bee stingers in entity		0
14	OptBlockPos	Location of the bed that the entity is currently sleeping in (Empty if it isn't sleeping)		Empty

Player

Extends [Living Entity](#).

Index	Type	Meaning		Default
15	Float	Additional Hearts		0.0
16	VarInt	Score		0
17	Byte	The Displayed Skin Parts bit mask that is sent in Client Settings		0
		Bit mask	Meaning	
		0x01	Cape enabled	
		0x02	Jacket enabled	
		0x04	Left sleeve enabled	
		0x08	Right sleeve enabled	
		0x10	Left pants leg enabled	
		0x20	Right pants leg enabled	
		0x40	Hat enabled	
		0x80	<i>Unused</i>	
18	Byte	Main hand (0 : Left, 1 : Right)		1
19	NBT	Left shoulder entity data (for occupying parrot)		Empty
20	NBT	Right shoulder entity data (for occupying parrot)		Empty

Armor Stand

Extends [Living Entity](#).

Index	Type	Meaning		Default
15	Byte	Bit mask	Meaning	0
		0x01	Is Small	
		0x04	Has Arms	
		0x08	Has no BasePlate	
		0x10	Is Marker	
16	Rotations	Head rotation		(0.0, 0.0, 0.0)
17	Rotations	Body rotation		(0.0, 0.0, 0.0)
18	Rotations	Left arm rotation		(-10.0, 0.0, -10.0)
19	Rotations	Right arm rotation		(-15.0, 0.0, 10.0)
20	Rotations	Left leg rotation		(-1.0, 0.0, -1.0)
21	Rotations	Right leg rotation		(1.0, 0.0, 1.0)

Note that armor stands with the invisible flag from the base entity class set also cannot be attacked or damaged, except for by the void.

Mob

Extends Living Entity.

Index	Type	Meaning		Default
15	Byte	Bit mask	Meaning	0
		0x01	NoAI	
		0x02	Is left handed	
		0x04	Is aggressive	

Ambient Creature

Extends Mob.

No additional metadata.

Bat

Extends Ambient Creature.

Index	Type	Meaning		Default
16	Byte	Bit mask	Meaning	0
		0x01	Is hanging	

Pathfinder Mob

Extends Mob.

No additional metadata.

Water Animal

Extends Pathfinder Mob.

No additional metadata.

Squid

Extends Water Animal.

No additional metadata.

Dolphin

Extends Water Animal.

Index	Type	Meaning	Default
16	Position	Treasure position	(0, 0, 0)
17	Boolean	Has fish	false
18	VarInt	Moisture level	2400

Abstract fish

Extends Water Animal.

Index	Type	Meaning	Default
16	Boolean	From bucket	False

Cod

Extends Abstract fish.

No additional metadata.

Puffer fish

Extends Abstract fish.

Index	Type	Meaning	Default
17	VarInt	PuffState (varies from 0 to 2)	0

Salmon

Extends Abstract fish.

No additional metadata.

Tropical fish

Extends Abstract fish.

Index	Type	Meaning	Default
17	VarInt	Variant	0

Ageable Mob

Extends Pathfinder Mob.

Index	Type	Meaning	Default
16	Boolean	Is baby	false

Animal

Extends Ageable Mob.

No additional metadata.

Abstract Horse

Extends Animal.

Index	Type	Meaning		Default
17	Byte	Bit mask	Meaning	0
		0x01	<i>Unused</i>	
		0x02	Is Tame	
		0x04	Is saddled	
		0x08	Has bred	
		0x10	Is eating	
		0x20	Is rearing (on hind legs)	
		0x40	Is mouth open	
		0x80	<i>Unused</i>	
18	OptUUID	Owner		Absent

Horse

Extends Abstract Horse.

Index	Type	Meaning	Default
19	VarInt	Variant (Color & Style)	0

Zombie Horse

Extends Abstract Horse.

Skeleton Horse

Extends [Abstract Horse](#).

Chested Horse

Extends [Abstract Horse](#).

Index	Type	Meaning	Default
19	Boolean	Has Chest	false

Donkey

Extends [Chested Horse](#).

Llama

Extends [Chested Horse](#).

Index	Type	Meaning	Default
20	VarInt	Strength (number of columns of 3 slots in the llama's inventory once a chest is equipped)	0
21	VarInt	Carpet color (a dye color, or -1 if no carpet equipped)	-1
22	VarInt	Variant (0: llama_creamy.png, 1: llama_white.png, 2: llama_brown.png, 3: llama_gray.png)	0

Trader Llama

The base class.

No additional metadata.

Mule

Extends [Chested Horse](#).

Axolotl

Extends [Animal](#).

Index	Type	Meaning	Default
17	VarInt	Variant (0 = lucy, 1 = wild, 2 = gold, 3 = cyan, 4 = blue)	0 (lucy)
18	Boolean	If it is currently playing dead.	false
19	Boolean	If it was spawned from a bucket.	false

Bee

Extends [Animal](#).

Index	Type	Meaning		Default
17	Byte	Flags		0
		0x01	<i>Unused</i>	
		0x02	Is angry	
		0x04	Has stung	
		0x08	Has nectar	
18	VarInt	Anger time in ticks		0 (Not angry)

Fox

Extends [Animal](#).

Index	Type	Meaning		Default
17	VarInt	Type (0: red, 1: snow)		0 (red)
18	Byte	Bit mask	Meaning	0
		0x01	Is sitting	
		0x02	<i>Unused</i>	
		0x04	Is crouching	
		0x08	Is interested	
		0x10	Is pouncing	
		0x20	Is sleeping	
		0x40	Is faceplanted	
		0x80	Is defending	
19	OptUUID	First UUID (in UUIDs NBT)?		Absent
20	OptUUID	Second UUID (in UUIDs NBT)?		Absent

Ocelot

Extends [Animal](#).

Index	Type	Meaning	Default
17	Boolean	Is trusting	false

Panda

Extends [Animal](#).

Index	Type	Meaning		Default
17	Integer	Breed timer? Set to 32 when something happens, and then counts down to 0 again. At 29 and 14 (before counting down), will play the <code>entity.panda.cant_breed</code> sound event.		0
18	Integer	Sneeze timer. Counts up from 0; when it hits 1 the <code>entity.panda.pre_sneeze</code> event plays and when it hits 21 the <code>entity.panda.sneeze</code> event plays (and it is set back to 0 and the sneeze flag is cleared).		0
19	Integer	Eat timer. If nonzero, counts upwards.		0
20	Byte	Main Gene		0
21	Byte	Hidden Gene		0
22	Byte	Bit mask	Meaning	0
		0x01	Unused	
		0x02	Is sneezing	
		0x04	Is rolling	
		0x08	Is sitting	
		0x10	Is on back	

Pig

Extends [Animal](#).

Index	Type	Meaning	Default
17	Boolean	Has saddle	false
18	VarInt	Total time to "boost" with a carrot on a stick for	0

Whenever a carrot on a stick is used, if the pig is not currently boosting it will start to boost for 140 to 980 (inclusive) ticks. When boost time is changed, a counter is reset which counts up to the boost time, after which boosting will stop. The value remains set at its modified value even after boosting is stopped.

Rabbit

Extends [Animal](#).

Index	Type	Meaning	Default
17	VarInt	Type	0

Turtle

Extends [Animal](#).

Index	Type	Meaning	Default
17	BlockPos	Home pos	(0, 0, 0)
18	Boolean	Has egg	false
19	Boolean	Is laying egg	false
20	BlockPos	Travel pos	(0, 0, 0)
21	Boolean	Is going home	false
22	Boolean	Is traveling	false

Polar Bear

Extends [Animal](#).

Index	Type	Meaning	Default
17	Boolean	Is standing up	false

Chicken

Extends [Animal](#).

No additional metadata.

Cow

Extends [Animal](#).

No additional metadata.

Hoglin

Extends [Animal](#).

Index	Type	Meaning	Default
17	Boolean	Is immune to zombification	false

Mooshroom

Extends [Cow](#).

Index	Type	Meaning	Default
17	String	Variant ("red" or "brown")	red

Sheep

Extends [Animal](#).

Index	Type	Meaning		Default
17	Byte	Bit mask	Meaning	0
		0x0F	Color ID	
		0x10	Is sheared	

Strider

Extends Animal.

Index	Type	Meaning	Default
17	VarInt	Total time to "boost" with warped fungus on a stick for	0
18	Boolean	Is shaking (true unless riding a vehicle or on or in a block tagged with strider_warm_blocks (default: lava))	false
19	Boolean	Has saddle	false

Tameable Animal

Extends Animal.

Index	Type	Meaning		Default
17	Byte	Bit mask	Meaning	0
		0x01	Is sitting	
		0x02	<i>Unused</i>	
		0x04	Is tamed	
18	OptUUID	Owner		Absent

Cat

Extends Tameable Animal.

Index	Type	Meaning	Default
19	VarInt	Type (0 = tabby, 1 = black, 2 = red, 3 = siamese, 4 = british_shorthair, 5 = calico, 6 = persian, 7 = ragdoll, 8 = white, 9 = jellie, 10 = all_black)	1
20	Boolean	Is lying	false
21	Boolean	Is relaxed? (This makes their head go slightly upwards, unknown when used)	false
22	VarInt	Collar color (values are those <u>used with dyes</u> (https://minecraft.fandom.com/wiki/Data_values%23Dyes))	14 (Red)

Wolf

Extends Tameable Animal.

Index	Type	Meaning	Default
19	Boolean	Is begging	false
20	VarInt	Collar color (values are those <u>used with dyes</u> (https://minecraft.fandom.com/wiki/Data_values%23Dyes))	14 (Red)
21	VarInt	Anger time	0

Parrot

Extends Tameable Animal.

Index	Type	Meaning	Default
19	VarInt	Variant (0: red/blue, 1: blue, 2: green, 3: yellow/blue, 4: grey)	0

Abstract Villager

Extends Ageable Mob.

Index	Type	Meaning	Default
17	VarInt	Head shake timer (starts at 40, decrements each tick)	0

Villager

Extends Abstract Villager.

Index	Type	Meaning	Default
18	Villager Data	Villager Data	Plains/None/1

Wandering Trader

Extends Abstract Villager.

No additional metadata.

Abstract Golem

Extends Pathfinder Mob.

No additional metadata.

Iron Golem

Extends Abstract Golem.

Index	Type	Meaning		Default
16	Byte	Bit mask	Meaning	0
		0x01	Is player-created	

Snow Golem

Extends [Abstract Golem](#).

Index	Type	Meaning		Default
16	Byte	Bit mask	Meaning	0x10
		0x00	Has no pumpkin hat	
		0x10	Has pumpkin hat	

Shulker

Extends [Abstract Golem](#).

Index	Type	Meaning	Default
16	Direction	Attach face	Down (0)
17	OptPosition	Attachment position	Absent
18	Byte	Shield height	0
19	Byte	Color (dye color)	10 (purple)

Monster

Extends [Pathfinder Mob](#).

No additional metadata.

Base Piglin

Extends [Monster](#).

Index	Type	Meaning	Default
16	Boolean	Is immune to zombification	false

Piglin

Extends [Base Piglin](#).

Index	Type	Meaning	Default
17	Boolean	Is baby	false
18	Boolean	Is charging crossbow	false
19	Boolean	Is dancing	false

Piglin Brute

Extends [Base Piglin](#).

No additional metadata.

Blaze

Extends Monster.

Index	Type	Meaning		Default
16	Byte	Bit mask	Meaning	0
		0x01	Is on fire	

Creeper

Extends Monster.

Index	Type	Meaning	Default
16	VarInt	State (-1 = idle, 1 = fuse)	-1
17	Boolean	Is <u>charged</u> (https://minecraft.fandom.com/wiki/Creeper%23Charged_Creeper)	false
18	Boolean	Is ignited	false

Endermite

Extends Monster.

No additional metadata.

Giant

Extends Monster.

No additional metadata.

Guardian

Extends Monster.

Index	Type	Meaning	Default
16	Boolean	Is retracting spikes	false
17	VarInt	Target EID	0

Elder Guardian

Extends Guardian.

Silverfish

Extends Monster.

No additional metadata.

Raider

Extends Monster.

Index	Type	Meaning	Default
16	boolean	Is celebrating	false

"Is celebrating" appears to control the pose for vindicators and does not appear to be used by other types.

Abstract Illager

Extends Raider.

No additional metadata.

Vindicator

Extends Abstract Illager.

Pillager

Extends Abstract Illager.

Index	Type	Meaning	Default
17	Boolean	Is charging	false

Spellcaster Illager

Extends Abstract Illager.

Index	Type	Meaning	Default
17	Byte	Spell (0: none, 1: summon vex, 2: attack, 3: wololo, 4: disappear, 5: blindness)	0

Evoker

Extends Spellcaster Illager.

Illusioner

Extends Spellcaster Illager.

Ravager

Extends Raider.

No additional metadata.

Witch

Extends Raider.

Index	Type	Meaning	Default
17	Boolean	Is drinking potion	false

Evoker Fangs

Extends [Entity](#).

No additional metadata.

Vex

Extends [Monster](#).

Index	Type	Meaning		Default
16	Byte	Bit mask	Meaning	0
		0x01	Is attacking	

Abstract Skeleton

Extends [Monster](#).

No additional metadata.

Skeleton

Extends [Abstract Skeleton](#).

Wither Skeleton

Extends [Abstract Skeleton](#).

Stray

Extends [Abstract Skeleton](#).

Spider

Extends [Monster](#).

Index	Type	Meaning		Default
16	Byte	Bit mask	Meaning	0
		0x01	Is climbing	

Wither

Extends [Monster](#).

Index	Type	Meaning	Default
16	VarInt	Center head's target (entity ID, or 0 if no target)	0
17	VarInt	Left head's target (entity ID, or 0 if no target)	0
18	VarInt	Right head's target (entity ID, or 0 if no target)	0
19	VarInt	Invulnerable time	0

Zoglin

Extends Monster.

Index	Type	Meaning	Default
16	Boolean	Is baby	false

Zombie

Extends Monster.

Index	Type	Meaning	Default
16	Boolean	Is baby	false
17	VarInt	Unused (previously type)	0
18	Boolean	Is becoming a drowned	false

Zombie Villager

Extends Zombie.

Index	Type	Meaning	Default
19	Boolean	Is converting	false
20	Villager Data	Villager Data	Plains/None/1

Husk

Extends Zombie.

No additional metadata.

Drowned

Extends Zombie.

No additional metadata.

Zombified Piglin

Extends Zombie.

No additional metadata.

Enderman

Extends Monster.

Index	Type	Meaning	Default
16	Opt BlockID	Carried block	Absent
17	Boolean	Is screaming	false
18	Boolean	Is staring	false

Ender Dragon

Extends Mob.

Index	Type	Meaning	Default
16	VarInt	Dragon phase	10 (hover)

Phases (according to the wiki page on dragon data values (https://minecraft.fandom.com/wiki/Ender_Dragon%23Data_values)) are:

- 0: circling
- 1: strafing (preparing to shoot a fireball)
- 2: flying to the portal to land (part of transition to landed state)
- 3: landing on the portal (part of transition to landed state)
- 4: taking off from the portal (part of transition out of landed state)
- 5: landed, performing breath attack
- 6: landed, looking for a player for breath attack
- 7: landed, roar before beginning breath attack
- 8: charging player
- 9: flying to portal to die
- 10: hovering with no AI (default when using the /summon command).

Flying

Extends Mob.

No additional metadata.

Ghast

Extends Flying.

Index	Type	Meaning	Default
16	Boolean	Is attacking	false

Phantom

Extends Flying.

Index	Type	Meaning	Default
16	VarInt	Size	0

Hitbox size is determined by $\text{horizontal} = 0.9 + 0.2 * \text{size}$ and $\text{vertical} = 0.5 + 0.1 * i$

Slime

Extends Mob.

Index	Type	Meaning	Default
16	VarInt	Size	1

Llama Spit

Extends Entity.

Abstract Minecart

Extends Entity.

Index	Type	Meaning	Default
8	VarInt	Shaking power	0
9	VarInt	Shaking direction	1
10	Float	Shaking multiplier	0.0
11	VarInt	Custom block ID and damage	0
12	VarInt	Custom block Y position (in 16ths of a block)	6
13	Boolean	Show custom block	false

If show custom block is false, then each type of Minecart will render its own type of block with its own properties. Note that one does *not* need to send these values for the metadata fields, as the client will automatically select them if show custom block is false. They are only provided for reference to help with swapping out other blocks.

- Rideable Minecarts contain air (0:0) and have a y position of 6
- Chest Minecarts contain chests facing north (54:0) and have a y position of 8
- Furnace Minecarts contain a normal furnace facing north when unpowered (61:0) and a lit furnace facing north when powered (62:0) and have a y position of 6 in both cases
- Hopper Minecarts contain a hopper (154:0) and have a y position of 1
- TNT Minecarts contain TNT (46:0) and have a y position of 6
- Command block minecarts contain a Command Block (137:0) and have a y position of 6
- Spawner Minecarts contain a spawner (52:0) and have a y position of 6

Minecart

Extends Abstract Minecart.

No additional metadata.

Abstract Minecart Container

Extends Abstract Minecart.

No additional metadata.

Minecart Hopper

Extends Abstract Minecart Container.

No additional metadata.

Minecart Chest

Extends Abstract Minecart Container.

No additional metadata.

Minecart Furnace

Extends Abstract Minecart.

Index	Type	Meaning	Default
14	Boolean	Has fuel	false

Minecart TNT

Extends Abstract Minecart.

No additional metadata.

Minecart Spawner

Extends Abstract Minecart.

No additional metadata.

Minecart Command Block

Extends Abstract Minecart.

Index	Type	Meaning	Default
14	String	Command	
15	<u>Chat</u>	Last output	{"text":""}

Primed Tnt

Extends Entity.

Index	Type	Meaning	Default
8	VarInt	Fuse time	80

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