Introduction

Hello and welcome to this community project! Some of these changes are not completely accurate and are in general not helpful. "Fixed bug." I copied all of these from the [Wiki.vg protocol history](#) page and organized them by major releases instead of snapshots. It would greatly help if you could go through theses with me and find stuff like that and mark what they actually mean. You can leave suggestions in the document with these changes. The goal of this in the end is to know all of the changes from 1.7.5 (when Craft.Net last updated) and 1.16 (or any release after it). This would help greatly in the Sparticus Client that I have been making to allow for ray tracing and a bunch of other cool graphicle things for hopefully little performance. The remake would be like any other Minecraft client and the hope would be that it could connect to any server (Java Edition or Bedrock, 1.8.9 or 1.15). I mainly want to focus on right now getting Java Edition 1.8.9 working so I can test it on PvP servers and get a general feel around other clients. If you want to help out on the programming part join the Discord below to talk to me about it. I would love all the help I can get!

Resources

[Sparticus Website](#)
[Sparticus Blog](#)
[Sparticus Resources](#)
[Sparticus GitHub](#)
[Sparticus Contact](#)

1.16 (??????)

1.15.2 (Protocol version 578)

1.15.1 (Protocol version 575)

1.15 (Protocol version 573)

- Particle X/Y/Z positions are now doubles instead of floats
- Removed damage taken/tail position float metadata on wolves (was index 18), as it was redundant with health
- Added has enchantment glint boolean to tridents, with index 11, fixing MC-161976
- Added hashed seed long field to Join Game (between Dimension and Max Players) and Respawn (between Dimension and Gamemode)
- Added enable respawn screen boolean to end of Join Game, set to the opposite of the new doImmediateRespawn gamerule

- Added effect 11 to Change Game State, which enables the respawn screen if the param is 0 and disables it if the param is 1. This is sent when the doImmediateRespawn gamerule changes.
- Added array of 1024 biomes as ints to Chunk Data (only sent when full chunk is true), representing biomes in 4x4x4 clumps. Uncertain how the client derives the rest of the biome information.
- Added new stared at boolean to Enderman entity metadata, with index 17, presumably to fix MC-88209
- Removed Metadata field from Spawn Mob and Spawn Player, bringing these packets in line with Spawn Object, Spawn Experience Orb, and Spawn Painting
- Added Beehives to Update Block Entity, with index 14
- Added absorption amount VarInt to living entity metadata, with index 12; this shifts all child classes' metadata
- Added the Bee
- Moved Acknowledge Player Digging to be before Block Break Animation:
    - Changed ID of Player Digging from 0x5C to 0x08
    - Changed ID of Block Break Animation from 0x08 to 0x09
    - Changed ID of Update Block Entity from 0x09 to 0x0A
    - Changed ID of Block Action from 0x0A to 0x0B
    - Changed ID of Block Change from 0x0B to 0x0C
    - Changed ID of Boss Bar from 0x0C to 0x0D
    - Changed ID of Server Difficulty from 0x0D to 0x0E
    - Changed ID of Chat Message (clientbound) from 0x0E to 0x0F
    - Changed ID of Multi Block Change from 0x0F to 0x10
    - Changed ID of Tab-Complete (clientbound) from 0x10 to 0x11
    - Changed ID of Declare Commands from 0x11 to 0x12
    - Changed ID of Confirm Transaction (clientbound) from 0x12 to 0x13
    - Changed ID of Close Window (clientbound) from 0x13 to 0x14
    - Changed ID of Window Items from 0x14 to 0x15
    - Changed ID of Window Property from 0x15 to 0x16
    - Changed ID of Set Slot from 0x16 to 0x17
    - Changed ID of Set Cooldown from 0x17 to 0x18
    - Changed ID of Plugin Message (clientbound) from 0x18 to 0x19
    - Changed ID of Named Sound Effect from 0x19 to 0x1A
    - Changed ID of Disconnect (play) from 0x1A to 0x1B
    - Changed ID of Entity Status from 0x1B to 0x1C
    - Changed ID of Explosion from 0x1C to 0x1D
    - Changed ID of Unload Chunk from 0x1D to 0x1E
    - Changed ID of Change Game State from 0x1E to 0x1F
    - Changed ID of Open Horse Window from 0x1F to 0x20
    - Changed ID of Keep Alive (clientbound) from 0x20 to 0x21
    - Changed ID of Chunk Data from 0x21 to 0x22
    - Changed ID of Effect from 0x22 to 0x23
    - Changed ID of Particle from 0x23 to 0x24
    - Changed ID of Update Light from 0x24 to 0x25

- Changed ID of Join Game from 0x25 to 0x26
- Changed ID of Map Data from 0x26 to 0x27
- Changed ID of Trade List from 0x27 to 0x28
- Changed ID of Entity Relative Move from 0x28 to 0x29
- Changed ID of Entity Look And Relative Move from 0x29 to 0x2A
- Changed ID of Entity Look from 0x2A to 0x2B
- Changed ID of Entity from 0x2B to 0x2C
- Changed ID of Vehicle Move (clientbound) from 0x2C to 0x2D
- Changed ID of Open Book from 0x2D to 0x2E
- Changed ID of Open Window from 0x2E to 0x2F
- Changed ID of Open Sign Editor from 0x2F to 0x30
- Changed ID of Craft Recipe Response from 0x30 to 0x31
- Changed ID of Player Abilities (clientbound) from 0x31 to 0x32
- Changed ID of Combat Event from 0x32 to 0x33
- Changed ID of Player Info from 0x33 to 0x34
- Changed ID of Face Player from 0x34 to 0x35
- Changed ID of Player Position And Look (clientbound) from 0x35 to 0x36
- Changed ID of Unlock Recipes from 0x36 to 0x37
- Changed ID of Destroy Entities from 0x37 to 0x38
- Changed ID of Remove Entity Effect from 0x38 to 0x39
- Changed ID of Resource Pack Send from 0x39 to 0x3A
- Changed ID of Respawn from 0x3A to 0x3B
- Changed ID of Entity Head Look from 0x3B to 0x3C
- Changed ID of Select Advancement Tab from 0x3C to 0x3D
- Changed ID of World Border from 0x3D to 0x3E
- Changed ID of Camera from 0x3E to 0x3F
- Changed ID of Held Item Change (clientbound) from 0x3F to 0x40
- Changed ID of Update View Position from 0x40 to 0x41
- Changed ID of Update View Distance from 0x41 to 0x42
- Changed ID of Display Scoreboard from 0x42 to 0x43
- Changed ID of Entity Metadata from 0x43 to 0x44
- Changed ID of Attach Entity from 0x44 to 0x45
- Changed ID of Entity Velocity from 0x45 to 0x46
- Changed ID of Entity Equipment from 0x46 to 0x47
- Changed ID of Set Experience from 0x47 to 0x48
- Changed ID of Update Health from 0x48 to 0x49
- Changed ID of Scoreboard Objective from 0x49 to 0x4A
- Changed ID of Set Passengers from 0x4A to 0x4B
- Changed ID of Teams from 0x4B to 0x4C
- Changed ID of Update Score from 0x4C to 0x4D
- Changed ID of Spawn Position from 0x4D to 0x4E
- Changed ID of Time Update from 0x4E to 0x4F
- Changed ID of Title from 0x4F to 0x50
- Changed ID of Entity Sound Effect from 0x50 to 0x51

- Changed ID of Sound Effect from 0x51 to 0x52
- Changed ID of Stop Sound from 0x52 to 0x53
- Changed ID of Player List Header And Footer from 0x53 to 0x54
- Changed ID of NBT Query Response from 0x54 to 0x55
- Changed ID of Collect Item from 0x55 to 0x56
- Changed ID of Entity Teleport from 0x56 to 0x57
- Changed ID of Advancements from 0x57 to 0x58
- Changed ID of Entity Properties from 0x58 to 0x59
- Changed ID of Entity Effect from 0x59 to 0x5A
- Changed ID of Declare Recipes from 0x5A to 0x5B
- Changed ID of Tags from 0x5B to 0x5C

1.14.4 (Protocol version 498)

- Added Demand field to the Trade List packet (at the end of each element of the Trades array), fixing MC-151282
- Added Acknowledge Player Digging (0x5C)

1.14.3 (Protocol version 490)

- Added Can Restock boolean to Trade List, fixing MC-143369

1.14.2 (Protocol version 485)

1.14.1 (Protocol version 480)

- Added Abstract Merchant entity metadata, with a head shake timer field (index 15). Villager and Wandering Trader extend this, so their metadata is also shifted by 1.

1.14 (Protocol version 477)

- Added Update View Position (0x40), two VarInts.
- Reordered a lot of clientbound packets:
    - Changed ID of Window Items from 0x15 to 0x14
    - Changed ID of Window Property from 0x16 to 0x15
    - Changed ID of Set Slot from 0x17 to 0x16
    - Changed ID of Set Cooldown from 0x18 to 0x17
    - Changed ID of Plugin Message (clientbound) from 0x19 to 0x18
    - Changed ID of Named Sound Effect from 0x1A to 0x19
    - Changed ID of Disconnect (play) from 0x1B to 0x1A
    - Changed ID of Entity Status from 0x1C to 0x1B
    - Changed ID of Explosion from 0x1E to 0x1C
    - Changed ID of Unload Chunk from 0x1F to 0x1D
    - Changed ID of Change Game State from 0x20 to 0x1E
    - Changed ID of Open Horse Window from 0x14 to 0x1F

- Changed ID of Keep Alive (clientbound) from 0x21 to 0x20
- Changed ID of Chunk Data from 0x22 to 0x21
- Changed ID of Effect from 0x23 to 0x22
- Changed ID of Particle from 0x24 to 0x23
- Changed ID of Update Light from 0x57 to 0x24
- Changed ID of Trade List from 0x59 to 0x27
- Changed ID of Entity from 0x27 to 0x2B
- Changed ID of Vehicle Move (clientbound) from 0x2B to 0x2C
- Changed ID of Open Book from 0x2C to 0x2D
- Changed ID of Open Window from 0x58 to 0x2E
- Changed ID of Open Sign Editor from 0x2D to 0x2F
- Changed ID of Craft Recipe Response from 0x2E to 0x30
- Changed ID of Player Abilities (clientbound) from 0x2F to 0x31
- Changed ID of Combat Event from 0x30 to 0x32
- Changed ID of Player Info (previously called Player List Item) from 0x31 to 0x33
- Changed ID of Face Player from 0x32 to 0x34
- Changed ID of Player Position And Look (clientbound) from 0x33 to 0x35
- Changed ID of Unlock Recipes from 0x34 to 0x36
- Changed ID of Destroy Entities from 0x35 to 0x37
- Changed ID of Remove Entity Effect from 0x36 to 0x38
- Changed ID of Resource Pack Send from 0x37 to 0x39
- Changed ID of Respawn from 0x38 to 0x3A
- Changed ID of Entity Head Look from 0x39 to 0x3B
- Changed ID of Select Advancement Tab from 0x3A to 0x3C
- Changed ID of World Border from 0x3B to 0x3D
- Changed ID of Camera from 0x3C to 0x3E
- Changed ID of Held Item Change (clientbound) from 0x3D to 0x3F
- Changed ID of Update View Distance from 0x5A to 0x41
- Changed ID of Display Scoreboard from 0x3E to 0x42
- Changed ID of Entity Metadata from 0x3F to 0x43
- Changed ID of Attach Entity from 0x40 to 0x44
- Changed ID of Entity Velocity from 0x41 to 0x45
- Changed ID of Entity Equipment from 0x42 to 0x46
- Changed ID of Set Experience from 0x43 to 0x47
- Changed ID of Update Health from 0x44 to 0x48
- Changed ID of Scoreboard Objective from 0x45 to 0x49
- Changed ID of Set Passengers from 0x46 to 0x4A
- Changed ID of Teams from 0x47 to 0x4B
- Changed ID of Update Score from 0x48 to 0x4C
- Changed ID of Spawn Position from 0x49 to 0x4D
- Changed ID of Time Update from 0x4A to 0x4E
- Changed ID of Title from 0x4B to 0x4F
- Changed ID of Entity Sound Effect from 0x4E to 0x50

- - Changed ID of Sound Effect from 0x4D to 0x51
    - Changed ID of Stop Sound from 0x4C to 0x52
    - Changed ID of Player List Header And Footer from 0x4F to 0x53
    - Changed ID of NBT Query Response from 0x1D to 0x54
    - Changed ID of Collect Item from 0x50 to 0x55
    - Changed ID of Entity Teleport from 0x51 to 0x56
    - Changed ID of Advancements from 0x52 to 0x57
    - Changed ID of Entity Properties from 0x53 to 0x58
    - Changed ID of Entity Effect from 0x54 to 0x59
    - Changed ID of Declare Recipies from 0x55 to 0x5A
    - Changed ID of Tags from 0x56 to 0x5B
- Reordered some serverbound packets:
    - Changed ID of Keep Alive (serverbound) from 0x10 to 0x0F
    - Changed ID of Lock Difficulty from 0x0F to 0x10
    - Changed ID of Player Position from 0x12 to 0x11
    - Changed ID of Player Position And Look (serverbound) from 0x13 to 0x12
    - Changed ID of Player Look from 0x14 to 0x13
    - Changed ID of Player from 0x11 to 0x14
- Created Raid Participent entity, with boolean is celebrating boolean (14), which is now extended by Abstract Illager, Ravager, and Witch. This also produces metadata shifts for the various Illagers.
- Added Render Distance VarInt to Join Game
- Added clientbound Update View Distance packet (0x5A)
- Added serverbound Update Jigsaw Block packet (0x27)
- Shifts:
    - Changed ID of Update Structure Block from 0x27 to 0x28
    - Changed ID of Update Sign from 0x28 to 0x29
    - Changed ID of Animation (serverbound) from 0x29 to 0x2A
    - Changed ID of Spectate from 0x2A to 0x2B
    - Changed ID of Player Block Placement from 0x2B to 0x2C
    - Changed ID of Use Item from 0x2C to 0x2D
- Changed a lot of entity sizes
- Removed aggressive state/hand state byte metadata from Abstract Illager (was byte index 12), Abstract Skeleton (was boolean index 14), and Zombie (was boolean index 16), presumably replaced with pose
- Added Difficulty Locked to Server Difficulty
- Removed Difficulty field from Join Game and Respawn
- Added new fields to Trade List: XP, Special Price, Price Multiplier (in the trades array), villager level, experience, is regular villager (only one for the packet)
- Added serverbound Set Difficulty (0x02, payload one byte) and Lock Difficulty (0x0F, payload one boolean) packets, used in singleplayer
- Shifts:
    - Changed ID of Chat Message (serverbound) from 0x02 to 0x03

- ○ Changed ID of Client Status from 0x03 to 0x04
- ○ Changed ID of Client Settings from 0x04 to 0x05
- ○ Changed ID of Tab-Complete (serverbound) from 0x05 to 0x06
- ○ Changed ID of Confirm Transaction (serverbound) from 0x06 to 0x07
- ○ Changed ID of Enchant Item from 0x07 to 0x08
- ○ Changed ID of Click Window from 0x08 to 0x09
- ○ Changed ID of Close Window (serverbound) from 0x09 to 0x0A
- ○ Changed ID of Plugin Message (serverbound) from 0x0A to 0x0B
- ○ Changed ID of Edit Book from 0x0B to 0x0C
- ○ Changed ID of Query Entity NBT from 0x0C to 0x0D
- ○ Changed ID of Use Entity from 0x0D to 0x0E
- ○ Changed ID of Keep Alive (serverbound) from 0x0E to 0x10
- ○ Changed ID of Player from 0x0F to 0x11
- ○ Changed ID of Player Position from 0x10 to 0x12
- ○ Changed ID of Player Position And Look (serverbound) from 0x11 to 0x13
- ○ Changed ID of Player Look from 0x12 to 0x14
- ○ Changed ID of Vehicle Move (serverbound) from 0x13 to 0x15
- ○ Changed ID of Steer Boat from 0x14 to 0x16
- ○ Changed ID of Pick Item from 0x15 to 0x17
- ○ Changed ID of Craft Recipe Request from 0x16 to 0x18
- ○ Changed ID of Player Abilities (serverbound) from 0x17 to 0x19
- ○ Changed ID of Player Digging from 0x18 to 0x1A
- ○ Changed ID of Entity Action from 0x19 to 0x1B
- ○ Changed ID of Steer Vehicle from 0x1A to 0x1C
- ○ Changed ID of Recipe Book Data from 0x1B to 0x1D
- ○ Changed ID of Name Item from 0x1C to 0x1E
- ○ Changed ID of Resource Pack Status from 0x1D to 0x1F
- ○ Changed ID of Advancement Tab from 0x1E to 0x20
- ○ Changed ID of Select Trade from 0x1F to 0x21
- ○ Changed ID of Set Beacon Effect from 0x20 to 0x22
- ○ Changed ID of Held Item Change (serverbound) from 0x21 to 0x23
- ○ Changed ID of Update Command Block from 0x22 to 0x24
- ○ Changed ID of Update Command Block Minecart from 0x23 to 0x25
- ○ Changed ID of Creative Inventory Action from 0x24 to 0x26
- ○ Changed ID of Update Structure Block from 0x25 to 0x27
- ○ Changed ID of Update Sign from 0x26 to 0x28
- ○ Changed ID of Animation (serverbound) from 0x27 to 0x29
- ○ Changed ID of Spectate from 0x28 to 0x2A
- ○ Changed ID of Player Block Placement from 0x29 to 0x2B
- ○ Changed ID of Use Item from 0x2A to 0x2C
- Removed the Use Bed packet.
  - ○ Packet shifts after 0x34.
- Added "Pose" entity metadata serializer, which is an enum.

- Added Pose field to Entity's metadata (id 6); everything after shifts.
- Added Bed Location to the end of Living's metadata; everything after shifts again.
- Added Variant metadata to mooshroom (string that is either "red" or "brown")
- Removed Armor entity metadata from horse (and the forge-only armor item field). The Entity Equipment packet is used instead.
- Added foxes and entity metadata for foxes
- Added OptVarInt entity metadata serializer (id 17)
    - Used by fireworks for the entity which used it (for elytra boosting), replacing the fix to MC-111480 from 18w49a
- Removed object IDs; Spawn Object (0x00) now uses normal entity type IDs.
- Restructured the Player Block Placement packet, including the addition of a new field indicating whether the player's head is inside of a block (used by scaffolding when holding shift).
- Declare Recipes:
    - Moved recipe ID to after recipe serializer (formerly called recipe type)
    - Recipe serializers are now namespaced
- Reverted the changes to giants from 18w50a.
- Added Locked boolean to Map Data
- Split Open Window (formerly 0x14) into 2 packets: Open Horse Window (0x14) and Open Window (0x59)
- Menu IDs are no longer sent as strings, but instead numeric IDs specified by the minecraft:menu registry.
- Removed the ability to specify number of slots, which cleans up some parts of the code but does make it impossible to create 1/2/4/5 row sized chest windows (MC-142082)
- Replaced the minecraft:trader_list plugin message with a dedicated Trade List (0x5A) packet.
- Added campfire block entity, with ID 13.
- Replaced the minecraft:open_book plugin channel with a new packet, Open Book (0x2C). The layout is the same as with the channel: it only contains a hand parameter.
- Packet ID shifts:
    - Changed ID of Open Sign Editor from 0x2C to 0x2D
    - Changed ID of Craft Recipe Response from 0x2D to 0x2E
    - Changed ID of Player Abilities (clientbound) from 0x2E to 0x2F
    - Changed ID of Combat Event from 0x2F to 0x30
    - Changed ID of Player List Item from 0x30 to 0x31
    - Changed ID of Face Player from 0x31 to 0x32
    - Changed ID of Player Position And Look (clientbound) from 0x32 to 0x33
    - Changed ID of Use Bed from 0x33 to 0x34
    - Changed ID of Unlock Recipes from 0x34 to 0x35
    - Changed ID of Destroy Entities from 0x35 to 0x36

- ○ Changed ID of Remove Entity Effect from 0x36 to 0x37
- ○ Changed ID of Resource Pack Send from 0x37 to 0x38
- ○ Changed ID of Respawn from 0x38 to 0x39
- ○ Changed ID of Entity Head Look from 0x39 to 0x3A
- ○ Changed ID of Select Advancement Tab from 0x3A to 0x3B
- ○ Changed ID of World Border from 0x3B to 0x3C
- ○ Changed ID of Camera from 0x3C to 0x3D
- ○ Changed ID of Held Item Change (clientbound) from 0x3D to 0x3E
- ○ Changed ID of Display Scoreboard from 0x3E to 0x3F
- ○ Changed ID of Entity Metadata from 0x3F to 0x40
- ○ Changed ID of Attach Entity from 0x40 to 0x41
- ○ Changed ID of Entity Velocity from 0x41 to 0x42
- ○ Changed ID of Entity Equipment from 0x42 to 0x43
- ○ Changed ID of Set Experience from 0x43 to 0x44
- ○ Changed ID of Update Health from 0x44 to 0x45
- ○ Changed ID of Scoreboard Objective from 0x45 to 0x46
- ○ Changed ID of Set Passengers from 0x46 to 0x47
- ○ Changed ID of Teams from 0x47 to 0x48
- ○ Changed ID of Update Score from 0x48 to 0x49
- ○ Changed ID of Spawn Position from 0x49 to 0x4A
- ○ Changed ID of Time Update from 0x4A to 0x4B
- ○ Changed ID of Title from 0x4B to 0x4C
- ○ Changed ID of Stop Sound from 0x4C to 0x4D
- ○ Changed ID of Sound Effect from 0x4D to 0x4E
- ○ Changed ID of Entity Sound Effect from 0x4E to 0x4F
- ○ Changed ID of Player List Header And Footer from 0x4F to 0x50
- ○ Changed ID of Collect Item from 0x50 to 0x51
- ○ Changed ID of Entity Teleport from 0x51 to 0x52
- ○ Changed ID of Advancements from 0x52 to 0x53
- ○ Changed ID of Entity Properties from 0x53 to 0x54
- ○ Changed ID of Entity Effect from 0x54 to 0x55
- ○ Changed ID of Declare Recipes from 0x55 to 0x56
- ○ Changed ID of Tags from 0x56 to 0x57
- ○ Changed ID of Update Light from 0x57 to 0x58
- Added Blasting Recipe Book and Smoking Recipe Book information to Recipe Book Data (Serverbound 0x1B)
- Added Villager Data entity metadata serializer (ID 16)
  - ○ Used by villagers and zombie villagers to store the profession, type, and level. Replaces their old metadata varint that was just the profession.
- Giants now extend Zombie instead of Monster
- Fireball, Small Fireball, Eye of Ender, Snowball, Experience Bottle, Ender Pearl, and Egg now all have metadata for the item (MC-138660)
- Fixed MC-111480 by changing the fireworks shooter ID from a VarInt (with 0 meaning nobody) to an optional UUID

- Fixed MC-138918; the update light packet now properly uses both empty masks (and the notchian server now always has bits set in either the main mask or the empty mask, not both)
- Added jigsaw block entity with ID 12 as used in Update Block Entity
- Added heightmap NBT to chunk data
- Added 2 new masks to update light for empty sections; however, these have incorrect values (MC-138918)
- Split ocelots and cats into separate entities with separate metadata
- Added Entity Sound Effect (0x4E)
- Added Update Light (0x57)
- Changed the format of chunk data (0x22):
  - A count of non-air blocks is now included in chunk sections
  - Light is no longer included in chunk sections
- Added entity tags to Tags (0x56)
- Changed the order of values in the position type from x MSB, z LSB, y middle to x MSB, z middle, y LSB
- Added piercing level byte (8) to arrow entity metadata; this shifts the color field for tipped arrows and the loyalty level field for tridents from 8 to 9
- Added shot at angle boolean (8) to firework entity metadata
- Packet ID shifts:
  - Changed ID of Player List Header And Footer from 0x4E to 0x4F
  - Changed ID of Collect Item from 0x4F to 0x50
  - Changed ID of Entity Teleport from 0x50 to 0x51
  - Changed ID of Advancements from 0x51 to 0x52
  - Changed ID of Entity Properties from 0x52 to 0x53
  - Changed ID of Entity Effect from 0x53 to 0x54
  - Changed ID of Declare Recipes from 0x54 to 0x55
  - Changed ID of Tags from 0x55 to 0x56

1.13.2 (Protocol version 404)

● Restructured Slot. Added a boolean at the start that indicates whether or not the item is present instead of using -1 for the item ID; changed item ID from a short to a (optional) VarInt.

1.13.1 (Protocol version 401)

- Boss Bar now has separate flags for music (0x02) and fog (0x04), rather than using 0x02 for both (MC-123880)
- Changed the max length of the text for Tab Complete (serverbound) from 256 to 32500, to fix MC-132663
- Added a Hand parameter to Edit Book, to fix MC-84005
- Added an unused OptUUID entity metadata field to arrow with ID 7 (added at the same time as the OwnerUUID NBT, but that uses a separate unsync'd field; that field was added to fix MC-133715 which was caused by directly

referencing the entity which failed after dying and respawning). This shifts TippedArrow's color and trident's loyalty level to ID 8.

1.13 (Protocol version 393)

- Changed the ID of Login Plugin Message (clientbound) to 0x04, undoing the shifts that occurred in 1.13-pre3, to fix MC-131822
    - Disconnect (login) is again 0x00
    - Encryption Request is again 0x01
    - Login Success is again 0x02
    - Set Compression is again 0x03
- Changed the ID of Login Plugin Message (serverbound) to 0x02, undoing the shifts that occurred in 1.13-pre3, to fix MC-131822
    - Login Start is again 0x00
    - Encryption Response is again 0x01
- "Objective Value" in scoreboard objective and "Team Display Name" in teams are now text components, instead of raw strings.
- Fixed mode 2 on the scoreboard packet (MC-131382)
- Added clientbound packet NBT Query Response (0x1D)
- Added serverbound packets Query Block NBT (0x01) and Query Entity NBT (0x0C)
- Packet ID changes - Clientbound
    - Changed ID of Explosion from 0x1D to 0x1E
    - Changed ID of Unload Chunk from 0x1E to 0x1F
    - Changed ID of Change Game State from 0x1F to 0x20
    - Changed ID of Keep Alive (clientbound) from 0x20 to 0x21
    - Changed ID of Chunk Data from 0x21 to 0x22
    - Changed ID of Effect from 0x22 to 0x23
    - Changed ID of Spawn Particle from 0x23 to 0x24
    - Changed ID of Join Game from 0x24 to 0x25
    - Changed ID of Map from 0x25 to 0x26
    - Changed ID of Entity from 0x26 to 0x27
    - Changed ID of Entity Relative Move from 0x27 to 0x28
    - Changed ID of Entity Look And Relative Move from 0x28 to 0x29
    - Changed ID of Entity Look from 0x29 to 0x2A
    - Changed ID of Vehicle Move (clientbound) from 0x2A to 0x2B
    - Changed ID of Open Sign Editor from 0x2B to 0x2C
    - Changed ID of Craft Recipe Response from 0x2C to 0x2D
    - Changed ID of Player Abilities (clientbound) from 0x2D to 0x2E
    - Changed ID of Combat Event from 0x2E to 0x2F
    - Changed ID of Player List Item from 0x2F to 0x30
    - Changed ID of Face Player from 0x30 to 0x31
    - Changed ID of Player Position And Look (clientbound) from 0x31 to 0x32
    - Changed ID of Use Bed from 0x32 to 0x33

- ○ Changed ID of Unlock Recipes from 0x33 to 0x34
- ○ Changed ID of Destroy Entities from 0x34 to 0x35
- ○ Changed ID of Remove Entity Effect from 0x35 to 0x36
- ○ Changed ID of Resource Pack Send from 0x36 to 0x37
- ○ Changed ID of Respawn from 0x37 to 0x38
- ○ Changed ID of Entity Head Look from 0x38 to 0x39
- ○ Changed ID of Select Advancement Tab from 0x39 to 0x3A
- ○ Changed ID of World Border from 0x3A to 0x3B
- ○ Changed ID of Camera from 0x3B to 0x3C
- ○ Changed ID of Held Item Change (clientbound) from 0x3C to 0x3D
- ○ Changed ID of Display Scoreboard from 0x3D to 0x3E
- ○ Changed ID of Entity Metadata from 0x3E to 0x3F
- ○ Changed ID of Attach Entity from 0x3F to 0x40
- ○ Changed ID of Entity Velocity from 0x40 to 0x41
- ○ Changed ID of Entity Equipment from 0x41 to 0x42
- ○ Changed ID of Set Experience from 0x42 to 0x43
- ○ Changed ID of Update Health from 0x43 to 0x44
- ○ Changed ID of Scoreboard Objective from 0x44 to 0x45
- ○ Changed ID of Set Passengers from 0x45 to 0x46
- ○ Changed ID of Teams from 0x46 to 0x47
- ○ Changed ID of Update Score from 0x47 to 0x48
- ○ Changed ID of Spawn Position from 0x48 to 0x49
- ○ Changed ID of Time Update from 0x49 to 0x4A
- ○ Changed ID of Title from 0x4A to 0x4B
- ○ Changed ID of Stop Sound from 0x4B to 0x4C
- ○ Changed ID of Sound Effect from 0x4C to 0x4D
- ○ Changed ID of Player List Header And Footer from 0x4D to 0x4E
- ○ Changed ID of Collect Item from 0x4E to 0x4F
- ○ Changed ID of Entity Teleport from 0x4F to 0x50
- ○ Changed ID of Advancements from 0x50 to 0x51
- ○ Changed ID of Entity Properties from 0x51 to 0x52
- ○ Changed ID of Entity Effect from 0x52 to 0x53
- ○ Changed ID of Declare Recipes from 0x53 to 0x54
- ○ Changed ID of Tags from 0x54 to 0x55
- ● Packet ID changes - Serverbound
  - ○ Changed ID of Chat Message (serverbound) from 0x02 to 0x01 (back as it was before 1.13)
  - ○ Changed ID of Client Status from 0x03 to 0x02 (back as it was before 1.13)
  - ○ Changed ID of Client Settings from 0x04 to 0x03 (back as it was before 1.13)
  - ○ Changed ID of Tab-Complete (serverbound) from 0x04 to 0x05
  - ○ Changed ID of Confirm Transaction (serverbound) from 0x05 to 0x06
  - ○ Changed ID of Enchant Item from 0x06 to 0x07

- o Changed ID of Click Window from 0x07 to 0x08
- o Changed ID of Close Window (serverbound) from 0x08 to 0x09
- o Changed ID of Plugin message (serverbound) from 0x09 to 0x0A
- o Changed ID of Edit Book from 0x0A to 0x0B
- o (ID of Query Entity NBT is 0x0C)
- o Changed ID of Use Entity from 0x0B to 0x0D
- o Changed ID of Keep Alive (serverbound) from 0x0C to 0x0E
- o Changed ID of Player from 0x0D to 0x0F
- o Changed ID of Player Position from 0x0E to 0x10
- o Changed ID of Player Position And Look (serverbound) from 0x0F to 0x11
- o Changed ID of Player Look from 0x10 to 0x12
- o Changed ID of Vehicle Move (serverbound) from 0x11 to 0x13
- o Changed ID of Steer Boat from 0x12 to 0x14
- o Changed ID of Pick Item from 0x13 to 0x15
- o Changed ID of Craft Recipe Request from 0x14 to 0x16
- o Changed ID of Player Abilities (serverbound) from 0x15 to 0x17
- o Changed ID of Player Digging from 0x16 to 0x18
- o Changed ID of Entity Action from 0x17 to 0x19
- o Changed ID of Steer Vehicle from 0x18 to 0x1A
- o Changed ID of Recipe Book Data from 0x19 to 0x1B
- o Changed ID of Name Item from 0x1A to 0x1C
- o Changed ID of Resource Pack Status from 0x1B to 0x1D
- o Changed ID of Advancement Tab from 0x1C to 0x1E
- o Changed ID of Select Trade from 0x1D to 0x1F
- o Changed ID of Set Beacon Effect from 0x1E to 0x20
- o Changed ID of Held Item Change (serverbound) from 0x1F to 0x21
- o Changed ID of Update Command Block from 0x20 to 0x22
- o Changed ID of Update Command Block Minecart from 0x21 to 0x23
- o Changed ID of Creative Inventory Action from 0x22 to 0x24
- o Changed ID of Update Structure Block from 0x23 to 0x25
- o Changed ID of Update Sign from 0x24 to 0x26
- o Changed ID of Animation (serverbound) from 0x25 to 0x27
- o Changed ID of Spectate from 0x26 to 0x28
- o Changed ID of Player Block Placement from 0x27 to 0x29
- o Changed ID of Use Item from 0x28 to 0x2A
- The channel name in Plugin Message (serverbound) is now an Identifier.
  - o This packet is currently only used for the minecraft:brand channel.
- Removed most serverbound plugin messages, replacing them with dedicated packets:
  - o MC|BEdit and MC|BSign → Edit Book (0x0A)
  - o MC|PickItem → Pick Item (0x13)
  - o MC|ItemName → Name Item (0x1A)
  - o MC|TrSel → Select Trace (0x1D)
  - o MC|Beacon → Set Beacon Effect (0x1E)

- - ○ MC|AutoCmd → Update Command Block (0x20)
    - ○ MC|AdvCmd → Update Command Block Minecart (0x21)
    - ○ MC|Struct → Update Structure Block (0x23)
  - Packet IDs shifted:
    - ○ Changed the ID of Use Entity from 0x0A to 0x0B
    - ○ Changed the ID of Keep Alive (serverbound) from 0x0B to 0x0C
    - ○ Changed the ID of Player from 0x0C to 0x0D
    - ○ Changed the ID of Player Position from 0x0D to 0x0E
    - ○ Changed the ID of Player Position And Look (serverbound) from 0x0E to 0x0F
    - ○ Changed the ID of Player Look from 0x0F to 0x10
    - ○ Changed the ID of Vehicle Move (serverbound) from 0x10 to 0x11
    - ○ Changed the ID of Steer Boat from 0x11 to 0x12
    - ○ (ID of Pick Item is 0x13)
    - ○ Changed the ID of Craft Recipe Request from 0x12 to 0x14
    - ○ Changed the ID of Player Abilities (serverbound) from 0x13 to 0x15
    - ○ Changed the ID of Player Digging from 0x14 to 0x16
    - ○ Changed the ID of Entity Action from 0x15 to 0x17
    - ○ Changed the ID of Steer Vehicle from 0x16 to 0x18
    - ○ Changed the ID of Recipe Book Data from 0x17 to 0x19
    - ○ (ID of Name Item is 0x1A)
    - ○ Changed the ID of Resource Pack Status from 0x18 to 0x1B
    - ○ Changed the ID of Advancement Tab from 0x19 to 0x1C
    - ○ (ID of Select Trade is 0x1D)
    - ○ (ID of Set Beacon Effect is 0x1E)
    - ○ Changed the ID of Held Item Change (serverbound) from 0x1A to 0x1F
    - ○ (ID of Update Command Block is 0x20)
    - ○ (ID of Update Command Block Minecart is 0x21)
    - ○ Changed the ID of Creative Inventory Action from 0x1B to 0x22
    - ○ (ID of Update Structure Block is 0x23)
    - ○ Changed the ID of Update Sign from 0x1C to 0x24
    - ○ Changed the ID of Animation (serverbound) from 0x1D to 0x25
    - ○ Changed the ID of Spectate from 0x1E to 0x26
    - ○ Changed the ID of Player Block Placement from 0x1F to 0x27
    - ○ Changed the ID of Use Item from 0x20 to 0x28
  - Added Login Plugin Message (clientbound)
    - ○ Changed the ID of Disconnect (login) from 0x00 to 0x01
    - ○ Changed the ID of Encryption Request from 0x01 to 0x02
    - ○ Changed the ID of Login Success from 0x02 to 0x03
    - ○ Changed the ID of Set Compression from 0x03 to 0x04
  - Added Login Plugin Message (serverbound)
    - ○ Changed the ID of Login Start from 0x00 to 0x01
    - ○ Changed the ID of Encryption Response from 0x01 to 0x02
  - The channel name in Plugin Message (clientbound) is now an Identifier.

- - The serverbound variant was not changed.
  - Renamed several plugin channels:
    - MC|BOpen → minecraft:book_open
    - MC|Brand → minecraft:brand
    - MC|TrList → minecraft:trader_list
    - MC|DebugPath → minecraft:debug/path
    - MC|DebugNeighborsUpdate → minecraft:debug/neighbors_update
    - MC|DebugCaves → minecraft:debug/caves
    - MC|DebugStructures → minecraft:debug/structures
    - MC|DebugWorldGenAttempt → minecraft:debug/worldgen_attempt
  - The REGISTER and UNREGISTER channels have been renamed to minecraft:register and minecraft:unregister, as per https://twitter.com/Dinnerbone/status/1012052979250319360
- Added entity status 38 for dolphins
- Added value 104 to effect 5 of Change Game State, which prints a demo.day.6 message translated with the keycode for taking a screenshot. Prior to this version, all of the demo.day.# messages were sent directly as chat; now, this one is special-cased to use the correct key. Fixes MC-77856.
- Re-added Team Prefix and Suffix to the teams packet, as Chat components instead of §-based strings.
- To fix MC-126815, removed Direction And Type byte from the Map packet, and replaced it by a Type VarInt enum and Direction byte.
- Added minecraft:dolphin particle (49)
- Added action 5 to Update Block Entity (declare conduit), replacing the slot that was used by a flower plot several versions ago.
- Added minecraft:nautilus particle (48)
- Due to more block states being added, the chunk data packet now uses 14 bits per block.
- Added Has Display Name and Display Name to Map packet; added a lot of new markers
  - Map icons with types over 15 currently don't work on servers (see MC-126815).
- Added some new particles, which shifted particle IDs.
- Added tooltips to Tab-Complete (clientbound)
- Added Smelting Recipe Book Open and Smelting Recipe Book Filter Active fields to Unlock Recipes and Recipe Book Data
- Chunk Data biome array is now an array of Ints instead of Bytes
- Added several debug plugin channels:
  - MC|DebugCaves
  - MC|DebugStructures
  - MC|DebugWorldGenAttempt
- Added support for feet/eyes and restructured Face Entity
- Converted paintings to use a registry system for IDs

- Flattened entity IDs (burger)
- Added Face Player
- Removed prefix and suffix from Teams; color is now a VarInt enum instead of a byte
- ID changes:
    - Changed ID of Player Position And Look (clientbound) from 0x30 to 0x31
    - Changed ID of Use Bed from 0x31 to 0x32
    - Changed ID of Unlock Recipes from 0x32 to 0x33
    - Changed ID of Destroy Entities from 0x33 to 0x34
    - Changed ID of Remove Entity Effect from 0x34 to 0x35
    - Changed ID of Resource Pack Send from 0x35 to 0x36
    - Changed ID of Respawn from 0x36 to 0x37
    - Changed ID of Entity Head Look from 0x37 to 0x38
    - Changed ID of Select Advancement Tab from 0x38 to 0x39
    - Changed ID of World Border from 0x39 to 0x3A
    - Changed ID of Camera from 0x3A to 0x3B
    - Changed ID of Held Item Change (clientbound) from 0x3B to 0x3C
    - Changed ID of Display Scoreboard from 0x3C to 0x3D
    - Changed ID of Entity Metadata from 0x3D to 0x3E
    - Changed ID of Attach Entity from 0x3E to 0x3F
    - Changed ID of Entity Velocity from 0x3F to 0x40
    - Changed ID of Entity Equipment from 0x40 to 0x41
    - Changed ID of Set Experience from 0x41 to 0x42
    - Changed ID of Update Health from 0x42 to 0x43
    - Changed ID of Scoreboard Objective from 0x43 to 0x44
    - Changed ID of Set Passengers from 0x44 to 0x45
    - Changed ID of Teams from 0x45 to 0x46
    - Changed ID of Update Score from 0x46 to 0x47
    - Changed ID of Spawn Position from 0x47 to 0x48
    - Changed ID of Time Update from 0x48 to 0x49
    - Changed ID of Title from 0x49 to 0x4A
    - Changed ID of Stop Sound 0x49 to 0x4A from 0x4A to 0x4B
    - Changed ID of Sound Effect from 0x4B to 0x4C
    - Changed ID of Player List Header And Footer from 0x4C to 0x4D
    - Changed ID of Collect Item from 0x4D to 0x4E
    - Changed ID of Entity Teleport from 0x4E to 0x4F
    - Changed ID of Advancements from 0x4F to 0x50
    - Changed ID of Entity Properties from 0x50 to 0x51
    - Changed ID of Entity Effect from 0x51 to 0x52
    - Changed ID of Declare Recipes from 0x52 to 0x53
    - Changed ID of Tags from 0x53 to 0x54
- Added Tags

- Re-added mode 2 (update display text) and render mode to Scoreboard Objective; Scoreboard Objective now uses a VarInt enum instead of strings for modes.
- Craft Recipe Response, Craft Recipe Request, Unlock Recipes, and Recipe Book Data now use identifies instead of numeric recipe IDs
- Added Declare Recipes
- Reverted changes to Block Action.
- Reworked statistics - now uses numeric Category IDs and Statistic IDs instead of a text ID.
- Added start and length fields to Tab-Complete (clientbound) (0x10)
- The flattening - all block state IDs are different now.
- The direct palette in the chunk data packet no longer writes any fields, instead of writing a 0 for the equivalent of the length.
- Slots no longer have metadata with them.
- Removed mode 2 (update display text) and render type from from Scoreboard Objective.
- Changed the order of the fields for Block Action, but only when reading, not when writing
- Removed action 5 from Update Block Entity (Set type of flower in flower pot)
- Changed behavior of effect IDs 1010 (play record) and 2001 ("Block break + block break sound") in the Effect packet to use new IDs.
- Note blocks no longer use the id and parameter for its block action; instead, they use their block state.
- Re-added Tab-Complete (clientbound), with a new structure.
- Re-added Tab-Complete (serverbound), with a new structure.
- Implemented Declare Commands.
- Clientbound packet ID changes:
    - Changed ID of (newly-re-added) Tab-Complete (clientbound) from 0x0E to 0x10
    - Changed ID of Declare Commands from 0x10 to 0x11
    - Changed ID of Confirm Transaction (clientbound) from 0x11 to 0x12
    - Changed ID of Close Window (clientbound) from 0x12 to 0x13
    - Changed ID of Open Window from 0x13 to 0x14
    - Changed ID of Window Items from 0x14 to 0x15
    - Changed ID of Window Property from 0x15 to 0x16
    - Changed ID of Set Slot from 0x16 to 0x17
    - Changed ID of Set Cooldown from 0x17 to 0x18
    - Changed ID of Plugin Message (clientbound) from 0x18 to 0x19
    - Changed ID of Named Sound Effect from 0x19 to 0x1A
    - Changed ID of Disconnect (play) from 0x1A to 0x1B
    - Changed ID of Entity Status from 0x1B to 0x1C
    - Changed ID of Explosion from 0x1C to 0x1D
    - Changed ID of Unload Chunk from 0x1D to 0x1E
    - Changed ID of Change Game State from 0x1E to 0x1F
    - Changed ID of Keep Alive (clientbound) from 0x1F to 0x20

- Changed ID of Chunk Data from 0x20 to 0x21
- Changed ID of Effect from 0x21 to 0x22
- Changed ID of Particle from 0x22 to 0x23
- Changed ID of Join Game from 0x23 to 0x24
- Changed ID of Map from 0x24 to 0x25
- Changed ID of Entity from 0x25 to 0x26
- Changed ID of Entity Relative Move from 0x26 to 0x27
- Changed ID of Entity Look And Relative Move from 0x27 to 0x28
- Changed ID of Entity Look from 0x28 to 0x29
- Changed ID of Vehicle Move (clientbound) from 0x29 to 0x2A
- Changed ID of Open Sign Editor from 0x2A to 0x2B
- Changed ID of Craft Recipe Response from 0x2B to 0x2C
- Changed ID of Player Abilities (clientbound) from 0x2C to 0x2D
- Changed ID of Combat Event from 0x2D to 0x2E
- Changed ID of Player List Item from 0x2E to 0x2F
- Changed ID of Player Position And Look (clientbound) from 0x2F to 0x30
- Changed ID of Use Bed from 0x30 to 0x31
- Changed ID of Unlock Recipes from 0x31 to 0x32
- Changed ID of Destroy Entities from 0x32 to 0x33
- Changed ID of Remove Entity Effect from 0x33 to 0x34
- Changed ID of Resource Pack Send from 0x34 to 0x35
- Changed ID of Respawn from 0x35 to 0x36
- Changed ID of Entity Head Look from 0x36 to 0x37
- Changed ID of Select Advancement Tab from 0x37 to 0x38
- Changed ID of World Border from 0x38 to 0x39
- Changed ID of Camera from 0x39 to 0x3A
- Changed ID of Held Item Change (clientbound) from 0x3A to 0x3B
- Changed ID of Display Scoreboard from 0x3B to 0x3C
- Changed ID of Entity Metadata from 0x3C to 0x3D
- Changed ID of Attach Entity from 0x3D to 0x3E
- Changed ID of Entity Velocity from 0x3E to 0x3F
- Changed ID of Entity Equipment from 0x3F to 0x40
- Changed ID of Set Experience from 0x40 to 0x41
- Changed ID of Update Health from 0x41 to 0x42
- Changed ID of Scoreboard Objective from 0x42 to 0x43
- Changed ID of Set Passengers from 0x43 to 0x44
- Changed ID of Teams from 0x44 to 0x45
- Changed ID of Update Score from 0x45 to 0x46
- Changed ID of Spawn Position from 0x46 to 0x47
- Changed ID of Time Update from 0x47 to 0x48
- Changed ID of Title from 0x48 to 0x49
- Changed ID of Stop Sound 0x49 to 0x4A
- Changed ID of Sound Effect from 0x4A to 0x4B
- Changed ID of Player List Header And Footer from 0x4B to 0x4C

- ○ Changed ID of Collect Item from 0x4C to 0x4D
- ○ Changed ID of Entity Teleport from 0x4D to 0x4E
- ○ Changed ID of Advancements from 0x4E to 0x4F
- ○ Changed ID of Entity Properties from 0x4F to 0x50
- ○ Changed ID of Entity Effect from 0x50 to 0x51
- Reverted most of the serverbound packet ID changes from 17w45a. The only remaining changes from 1.12.2 are:
  - ○ Changed ID of Chat Message (serverbound) from 0x02 to 0x01
  - ○ Changed ID of Client Status from 0x03 to 0x02
  - ○ Changed ID of Client Settings from 0x04 to 0x03
  - ○ Changed ID of (newly-re-added) Tab-Complete (serverbound) from 0x01 to 0x04
- Removed Tab-Complete (clientbound) (was 0x0E)
- Removed Tab-Complete (serverbound) (was 0x01)
- Added Declare Commands (0x10), with no payload.
- Named Sound Effect (0x19) now uses identifiers
- Data format for Particle (0x22) is changed
- Added Stop Sound (0x49), replacing the former MC|StopSound plugin channel
- Packet ID changes - Clientbound
  - ○ Changed ID of Chat Message (clientbound) from 0x0F to 0x0E
  - ○ Changed ID of Multi Block Change from 0x10 to 0x0F
  - ○ Changed ID of Sound Effect from 0x49 to 0x4A
  - ○ Changed ID of Player List Header And Footer from 0x4A to 0x4B
  - ○ Changed ID of Collect Item from 0x4B to 0x4C
  - ○ Changed ID of Entity Teleport from 0x4C to 0x4D
  - ○ Changed ID of Advancements from 0x4D to 0x4E
  - ○ Changed ID of Entity Properties from 0x4E to 0x4F
  - ○ Changed ID of Entity Effect from 0x4F to 0x50
- Packet ID changes - Serverbound
  - ○ Changed ID of Chat Message (serverbound) from 0x02 to 0x01
  - ○ Changed ID of Client Status from 0x03 to 0x02
  - ○ Changed ID of Client Settings from 0x04 to 0x03
  - ○ Changed ID of Confirm Transaction (serverbound) from 0x05 to 0x04
  - ○ Changed ID of Enchant Item from 0x06 to 0x05
  - ○ Changed ID of Click Window from 0x07 to 0x06
  - ○ Changed ID of Close Window (serverbound) from 0x08 to 0x07
  - ○ Changed ID of Plugin Message (serverbound) from 0x09 to 0x08
  - ○ Changed ID of Use Entity from 0x0A to 0x09
  - ○ Changed ID of Keep Alive (serverbound) from 0x0B to 0x0A
  - ○ Changed ID of Player from 0x0C to 0x0B
  - ○ Changed ID of Player Position from 0x0D to 0x0C
  - ○ Changed ID of Player Position And Look (serverbound) from 0x0E to 0x0D

- ○ Changed ID of Player Look from 0x0F to 0x0E
- ○ Changed ID of Vehicle Move (serverbound) from 0x10 to 0x0F
- ○ Changed ID of Steer Boat from 0x11 to 0x10
- ○ Changed ID of Craft Recipe Request from 0x12 to 0x11
- ○ Changed ID of Player Abilities (serverbound) from 0x13 to 0x12
- ○ Changed ID of Player Digging from 0x14 to 0x13
- ○ Changed ID of Entity Action from 0x15 to 0x14
- ○ Changed ID of Steer Vehicle from 0x16 to 0x15
- ○ Changed ID of Crafting Book Data from 0x17 to 0x16
- ○ Changed ID of Resource Pack Status from 0x18 to 0x17
- ○ Changed ID of Advancement Tab from 0x19 to 0x18
- ○ Changed ID of Held Item Change (serverbound) from 0x1A to 0x19
- ○ Changed ID of Creative Inventory Action from 0x1B to 0x1A
- ○ Changed ID of Update Sign from 0x1C to 0x1B
- ○ Changed ID of Animation (serverbound) from 0x1D to 0x1C
- ○ Changed ID of Spectate from 0x1E to 0x1D
- ○ Changed ID of Player Block Placement from 0x1F to 0x1E
- ○ Changed ID of Use Item from 0x20 to 0x1F

1.12.2 (Protocol version 340)

- ● Changed parameters in Keep Alive (clientbound - 0x1F) and Keep Alive (serverbound - 0x0B) from VarInts to longs.

1.12.1 (Protocol version 338)

- ● Added Craft Recipe Response (0x2B)
- ● Removed Prepare Crafting Grid (0x01) and replaced it with Craft Recipe Request (0x12)
- ● Packet ID changes:
    - ○ Changed ID of Player Abilities (clientbound) from 0x2B to 0x2C
    - ○ Changed ID of Combat Event from 0x2C to 0x2D
    - ○ Changed ID of Player List Item from 0x2D to 0x2E
    - ○ Changed ID of Player Position And Look (clientbound) from 0x2E to 0x2F
    - ○ Changed ID of Use Bed from 0x2F to 0x30
    - ○ Changed ID of Unlock Recipes from 0x30 to 0x31
    - ○ Changed ID of Destroy Entities from 0x31 to 0x32
    - ○ Changed ID of Remove Entity Effect from 0x32 to 0x33
    - ○ Changed ID of Resource Pack Send from 0x33 to 0x34
    - ○ Changed ID of Respawn from 0x34 to 0x35
    - ○ Changed ID of Entity Head Look from 0x35 to 0x36
    - ○ Changed ID of Select Advancement Tab from 0x36 to 0x37
    - ○ Changed ID of World Border from 0x37 to 0x38
    - ○ Changed ID of Camera from 0x38 to 0x39
    - ○ Changed ID of Held Item Change (clientbound) from 0x39 to 0x3A

- ○ Changed ID of Display Scoreboard from 0x3A to 0x3B
- ○ Changed ID of Entity Metadata from 0x3B to 0x3C
- ○ Changed ID of Attach Entity from 0x3C to 0x3D
- ○ Changed ID of Entity Velocity from 0x3D to 0x3E
- ○ Changed ID of Entity Equipment from 0x3E to 0x3F
- ○ Changed ID of Set Experience from 0x3F to 0x40
- ○ Changed ID of Update Health from 0x40 to 0x41
- ○ Changed ID of Scoreboard Objective from 0x41 to 0x42
- ○ Changed ID of Set Passengers from 0x42 to 0x43
- ○ Changed ID of Teams from 0x43 to 0x44
- ○ Changed ID of Update Score from 0x44 to 0x45
- ○ Changed ID of Spawn Position from 0x45 to 0x46
- ○ Changed ID of Time Update from 0x46 to 0x47
- ○ Changed ID of Title from 0x47 to 0x48
- ○ Changed ID of Sound Effect from 0x48 to 0x49
- ○ Changed ID of Player List Header And Footer from 0x49 to 0x4A
- ○ Changed ID of Collect Item from 0x4A to 0x4B
- ○ Changed ID of Entity Teleport from 0x4B to 0x4C
- ○ Changed ID of Advancements from 0x4C to 0x4D
- ○ Changed ID of Entity Properties from 0x4D to 0x4E
- ○ Changed ID of Entity Effect from 0x4E to 0x4F
- ○ Changed ID of Tab-Complete (serverbound) from 0x02 to 0x01
- ○ Changed ID of Chat Message (serverbound) from 0x03 to 0x02
- ○ Changed ID of Client Status from 0x04 to 0x03
- ○ Changed ID of Client Settings from 0x05 to 0x04
- ○ Changed ID of Confirm Transaction (serverbound) from 0x06 to 0x05
- ○ Changed ID of Enchant Item from 0x07 to 0x06
- ○ Changed ID of Click Window from 0x08 to 0x07
- ○ Changed ID of Close Window (serverbound) from 0x09 to 0x08
- ○ Changed ID of Plugin Message (serverbound) from 0x0A to 0x09
- ○ Changed ID of Use Entity from 0x0B to 0x0A
- ○ Changed ID of Keep Alive (serverbound) from 0x0C to 0x0B
- ○ Changed ID of Player from 0x0D to 0x0C
- ○ Changed ID of Player Position from 0x0E to 0x0D
- ○ Changed ID of Player Position And Look (serverbound) from 0x0F to 0x0E
- ○ Changed ID of Player Look from 0x10 to 0x0F
- ○ Changed ID of Vehicle Move (serverbound) from 0x11 to 0x10
- ○ Changed ID of Steer Boat from 0x12 to 0x11

1.12 (Protocol version 335)

- ● Unlock Recipes (0x30): Changed type of Action from Short to VarInt
- ● Crafting Book Data (0x17): Changed type of Type from Int to VarInt

- Travesty! Packet ID changes! Except they aren't actually that horrible, as they're actually mainly reverting changes from before:

Clientbound

- Changed ID of Block Break Animation from 0x09 to 0x08
- Changed ID of Update Block Entity from 0x0A to 0x09
- Changed ID of Block Action from 0x0B to 0x0A
- Changed ID of Block Change from 0x0C to 0x0B
- Changed ID of Boss Bar from 0x0D to 0x0C
- Changed ID of Server Difficulty from 0x0E to 0x0D
- Changed ID of Tab-Complete (clientbound) from 0x0F to 0x0E
- Changed ID of Chat Message (clientbound) from 0x10 to 0x0F
- Changed ID of Multi Block Change from 0x11 to 0x10
- Changed ID of Confirm Transation (clientbound) from 0x12 to 0x11
- Changed ID of Close Window (clientbound) from 0x13 to 0x12
- Changed ID of Open Window from 0x14 to 0x13
- Changed ID of Window Items from 0x15 to 0x14
- Changed ID of Window Property from 0x16 to 0x15
- Changed ID of Set Slot from 0x17 to 0x16
- Changed ID of Set Cooldown from 0x18 to 0x17
- Changed ID of Plugin Message (clientbound) from 0x19 to 0x18
- Changed ID of Named Sound Effect from 0x1A to 0x19
- Changed ID of Disconnect (play) from 0x1B to 0x1A
- Changed ID of Entity Status from 0x1C to 0x1B
- Changed ID of Explosion from 0x1D to 0x1C
- Changed ID of Unload Chunk from 0x1E to 0x1D
- Changed ID of Change Game State from 0x1F to 0x1E
- Changed ID of Keep Alive (clientbound) from 0x20 to 0x1F
- Changed ID of Chunk Data from 0x21 to 0x20
- Changed ID of Effect from 0x22 to 0x21
- Changed ID of Particle from 0x23 to 0x22
- Changed ID of Join Game from 0x24 to 0x23
- Changed ID of Particle from 0x25 to 0x24
- Changed ID of Entity from 0x28 to 0x25
- Changed ID of Vehicle Move (clientbound) from 0x2A to 0x29
- Changed ID of Open Sign Editor from 0x2B to 0x2A
- Changed ID of Player Abilities (clientbound) from 0x2C to 0x2B
- Changed ID of Combat Event from 0x2D to 0x2C
- Changed ID of Player List Item from 0x2E to 0x2D
- Changed ID of Player Position And Look (clientbound) from 0x2F to 0x2E
- Changed ID of Use Bed from 0x30 to 0x2F
- Changed ID of Unlock Recipes from 0x31 to 0x30
- Changed ID of Destroy Entities from 0x32 to 0x31
- Changed ID of Remove Entity Effect from 0x33 to 0x32

- ○ Changed ID of Resource Pack Send from 0x34 to 0x33
- ○ Changed ID of Respawn from 0x35 to 0x34
- ○ Changed ID of Entity Head Look from 0x36 to 0x35
- ○ Changed ID of Advancement Progress from 0x4E to 0x36
- ○ Changed ID of Advancements from 0x08 to 0x4C
- ○ Changed ID of Entity Properties from 0x4C to 0x4D
- ○ Changed ID of Entity Effect from 0x4D to 0x4E

Serverbound

- ○ Changed ID of Player from 0x10 to 0x0D
- ○ Changed ID of Player Position from 0x0D to 0x0E
- ○ Changed ID of Player Position And Look (serverbound) from 0x0E to 0x0F
- ○ Changed ID of Player Look 0x0F to 0x10
- ○ Changed ID of Advancement Tab from 0x20 to 0x19
- ○ Changed ID of Held Item Change (serverbound) from 0x19 to 0x1A
- ○ Changed ID of Creative Inventory Action from 0x1A to 0x1B
- ○ Changed ID of Update Sign from 0x1B to 0x1C
- ○ Changed ID of Animation (serverbound) from 0x1C to 0x1D
- ○ Changed ID of Spectate from 0x1D to 0x1E
- ○ Changed ID of Player Block Placement from 0x1E to 0x1F
- ○ Changed ID of Use Item from 0x1F to 0x20
- ● The above changes produce this set of changes from 1.11.2 (which is less horrible than you'd think, since the majority of the above changes "unshift" from before):

Clientbound

- ○ Changed ID of Entity from 0x28 to 0x25
- ○ Changed ID of Entity Relative Move from 0x25 to 0x26
- ○ Changed ID of Entity Look And Relative Move from 0x26 to 0x27
- ○ Changed ID of Entity Look from 0x27 to 0x28
- ○ Added Unlock Recipes as 0x30
- ○ Changed ID of Destroy Entities from 0x30 to 0x31
- ○ Changed ID of Remove Entity Effect from 0x31 to 0x32
- ○ Changed ID of Resource Pack Send from 0x32 to 0x33
- ○ Changed ID of Respawn from 0x33 to 0x34
- ○ Changed ID of Entity Head Look from 0x34 to 0x35
- ○ Added Advancement Progress as 0x36
- ○ Changed ID of World Border from 0x35 to 0x37
- ○ Changed ID of Camera from 0x36 to 0x38
- ○ Changed ID of Held Item Change (clientbound) from 0x37 to 0x39
- ○ Changed ID of Display Scoreboard from 0x38 to 0x3A
- ○ Changed ID of Entity Metadata from 0x39 to 0x3B
- ○ Changed ID of Attach Entity from 0x3A to 0x3C
- ○ Changed ID of Entity Velocity from 0x3B to 0x3D

- ○ Changed ID of Entity Equipment from 0x3C to 0x3E
- ○ Changed ID of Set Experience from 0x3D to 0x3F
- ○ Changed ID of Update Health from 0x3E to 0x40
- ○ Changed ID of Scoreboard Objective from 0x3F to 0x41
- ○ Changed ID of Set Passengers from 0x40 to 0x42
- ○ Changed ID of Teams from 0x41 to 0x43
- ○ Changed ID of Update Score from 0x42 to 0x44
- ○ Changed ID of Spawn Position from 0x43 to 0x45
- ○ Changed ID of Time Update from 0x44 to 0x46
- ○ Changed ID of Title from 0x45 to 0x47
- ○ Changed ID of Sound Effect from 0x46 to 0x48
- ○ Changed ID of Player List Header And Footer from 0x47 to 0x49
- ○ Changed ID of Collect Item from 0x48 to 0x4A
- ○ Changed ID of Entity Teleport from 0x49 to 0x4B
- ○ Added Advancements as 0x4C
- ○ Changed ID of Entity Properties from 0x4A to 0x4D
- ○ Changed ID of Entity Effect from 0x4B to 0x4E

Serverbound

- ○ Added Prepare Crafting Grid as 0x01
- ○ Changed ID of Tab-Complete (serverbound) from 0x01 to 0x02
- ○ Changed ID of Chat Message (serverbound) from 0x02 to 0x03
- ○ Changed ID of Client Status from 0x03 to 0x04
- ○ Changed ID of Client Settings from 0x04 to 0x05
- ○ Changed ID of Confirm Transaction (serverbound) from 0x05 to 0x06
- ○ Changed ID of Enchant Item from 0x06 to 0x07
- ○ Changed ID of Click Window from 0x07 to 0x08
- ○ Changed ID of Close Window (serverbound) from 0x08 to 0x09
- ○ Changed ID of Plugin Message (serverbound) from 0x09 to 0x0A
- ○ Changed ID of Use Entity from 0x0A to 0x0B
- ○ Changed ID of Keep Alive (serverbound) from 0x0B to 0x0C
- ○ Changed ID of Player from 0x0F to 0x0D
- ○ Changed ID of Player Position from 0x0C to 0x0E
- ○ Changed ID of Player Position And Look (serverbound) from 0x0D to 0x0F
- ○ Changed ID of Player Look from 0x0E to 0x10
- ○ Changed ID of Vehicle Move (serverbound) from 0x10 to 0x11
- ○ Changed ID of Steer Boat from 0x11 to 0x12
- ○ Changed ID of Player Abilities (serverbound) from 0x12 to 0x13
- ○ Changed ID of Player Digging from 0x13 to 0x14
- ○ Changed ID of Entity Action from 0x14 to 0x15
- ○ Changed ID of Steer Vehicle from 0x15 to 0x16
- ○ Added Crafting Book Data as 0x17
- ○ Changed ID of Resource Pack Status from 0x16 to 0x18

- - Added Advancement Tab as 0x19
  - Changed ID of Held Item Change (serverbound) from 0x17 to 0x1A
  - Changed ID of Creative Inventory Action from 0x18 to 0x1B
  - Changed ID of Update Sign from 0x19 to 0x1C
  - Changed ID of Animation (serverbound) from 0x1A to 0x1D
  - Changed ID of Spectate from 0x1B to 0x1E
  - Changed ID of Player Block Placement from 0x1C to 0x1F
  - Changed ID of Use Item Current (unchanged) from 0x1D to 0x20
- Added Advancement Progress (0x4E)
- Added Advancement Tab (0x20)
- Translation component now converts chat.type.text (<%s> %s) to chat.type.text.narrate (%s says %s) when passing info to narrator.
- Client Settings (0x05): max length of language was changed from 7 to 16 (see MC-111054)
- Maximum length for MC|ItemName is now 35 instead of 30 (see MC-112017)
- Removed show toast and has background booleans from Advancements (0x08); changed it to a flags Integer (0x1: has background texture; 0x2: show_toast; 0x4: hidden).
- Reverted the changes to name sound effect (0x48) made in 17w15a
- Advancements (0x08):
  - Added a Show toast boolean before the coordinates
  - Made x coord and y coord floats instead of varints
- Prepare Crafting Grid: array sizes are shorts instead of bytes
- Added the keybind chat component
- Advancements (0x08): Changed Icon from a raw ID to a Slot
- Unlock Recipes (0x31):
  - Removed notification; in its place added a short for the action
  - Changed the packet to have 2 arrays: one for recipes to display, one to silently add.
  - Hardcoded recipe IDs
- Added IllusionIllager (entity ID 37)
- Added Flute (5, used for clay; plays block.note.flute), Bell (6, used for gold blocks; plays block.note.bell), Guitar (7, used for wool; plays block.note.guitar), Chime (8, used for packed ice; plays block.note.chime), and Xylophone (9, used for bone blocks; plays block.note.xylophone) sounds for note block block action (at this time, there were no sounds associated with the sound event, though)
- Added living entity statuses 36 (drowning) and 37 (burning)
- Changed name sound effect (0x48):
  - Sound category moved to the top
  - Added Parrotted entity type field after sound ID
- Added ID 11 (Set the color of a bed) to Update Block Entity (0x0A)
- Advancements (0x08):
  - Fixed Has parent only being written, not read
  - Added chat blob for Description (after title)

- Advancements (clientbound, id 0x08):
  - Fixed reading/writing y coord as different types
  - ... but broke Has parent (only writing it, not reading it)
  - Added type goal (id 2)
- Unlock Recipes (0x31):
  - Added a boolean flag for whether a 'New Recipes Unlocked!' should be displayed
  - Added a boolean flag for whether the crafting book should be opened when the inventory is opened
  - Added a boolean flag for whether filtering will be active when the inventory is opened
- Prepare Crafting Grid (0x01):
  - Replaced boolean flag with an Int enum (not VarInt) for the layout of the packet
  - Added an array (size-prefixed) of prepare items (before the return items)
  - Changed the partial ID in Return Entry to a full item
- Removed Open Inventory (id 2) from Client Status (0x04)
- Entity metadata:
  - Added NBT tag as a metadata type
  - Added Parrots (ID 105). Has one metadata field of type Varint (id 15), which is the variant.
  - Added 2 metadata fields to players, both of type NBT tag. 15 is the left shoulder parrot, and 16 is the right shoulder parrot.
- Added Identifier as a protocol type (this is basically a string with special handling)
- Added several packets:
  - Advancements (clientbound, id 0x08)
    - *Malformed* due to reading one type for y coord and writing another
  - Unlock Recipe (clientbound, id 0x31)
  - Prepare Crafting Grid (originally incorrectly labeled Crafting Book Data) (id 0x01)
  - Crafting Book Data (originally incorrectly Recipe displayed) (serverbound, 0x17)
- Shifted a ton of packets (NOTE: before implementing this, note that some were shifted back in 1.12-pre5):

Clientbound

  - Changed ID of Block Break Animation changed from 0x08 to 0x09
  - Changed ID of Update Block Entity changed from 0x09 to 0x0A
  - Changed ID of Block Action changed from 0x0A to 0x0B
  - Changed ID of Block Change changed from 0x0B to 0x0C
  - Changed ID of Boss Bar changed from 0x0C to 0x0D
  - Changed ID of Server Difficulty changed from 0x0D to 0x0E

- Changed ID of Tab-Complete (clientbound) changed from 0x0E to 0x0F
- Changed ID of Chat Message (clientbound) changed from 0x0F to 0x10
- Changed ID of Multi Block Change changed from 0x10 to 0x11
- Changed ID of Confirm Transation (clientbound) changed from 0x11 to 0x12
- Changed ID of Close Window (clientbound) changed from 0x12 to 0x13
- Changed ID of Open Window changed from 0x13 to 0x14
- Changed ID of Window Items changed from 0x14 to 0x15
- Changed ID of Window Property changed from 0x15 to 0x16
- Changed ID of Set Slot changed from 0x16 to 0x17
- Changed ID of Set Cooldown changed from 0x17 to 0x18
- Changed ID of Plugin Message (clientbound) changed from 0x18 to 0x19
- Changed ID of Named Sound Effect changed from 0x19 to 0x1A
- Changed ID of Disconnect (play) changed from 0x1A to 0x1B
- Changed ID of Entity Status changed from 0x1B to 0x1C
- Changed ID of Explosion changed from 0x1C to 0x1D
- Changed ID of Unload Chunk changed from 0x1D to 0x1E
- Changed ID of Change Game State changed from 0x1E to 0x1F
- Changed ID of Keep Alive (clientbound) changed from 0x1F to 0x20
- Changed ID of Chunk Data changed from 0x20 to 0x21
- Changed ID of Effect changed from 0x21 to 0x22
- Changed ID of Particle changed from 0x22 to 0x23
- Changed ID of Join Game changed from 0x23 to 0x24
- Changed ID of Particle changed from 0x24 to 0x25
- Changed ID of Entity Relative Move changed from 0x25 to 0x26
- Changed ID of Entity Look And Relative Move changed from 0x26 to 0x27
- Changed ID of Entity Look changed from 0x27 to 0x28
- Changed ID of Entity changed from 0x28 to 0x29
- Changed ID of Vehicle Move (clientbound) changed from 0x29 to 0x2A
- Changed ID of Open Sign Editor changed from 0x2A to 0x2B
- Changed ID of Player Abilities (clientbound) changed from 0x2B to 0x2C
- Changed ID of Combat Event changed from 0x2C to 0x2D
- Changed ID of Player List Item changed from 0x2D to 0x2E
- Changed ID of Player Position And Look (clientbound) changed from 0x2E to 0x2F
- Changed ID of Use Bed changed from 0x2F to 0x30
- Changed ID of Destroy Entities changed from 0x30 to 0x32
- Changed ID of Remove Entity Effect changed from 0x31 to 0x33

- ○ Changed ID of Resource Pack Send changed from 0x32 to 0x34
- ○ Changed ID of Respawn changed from 0x33 to 0x35
- ○ Changed ID of Entity Head Look changed from 0x34 to 0x36
- ○ Changed ID of World Border changed from 0x35 to 0x37
- ○ Changed ID of Camera changed from 0x36 to 0x38
- ○ Changed ID of Held Item Change (clientbound) changed from 0x37 to 0x39
- ○ Changed ID of Display Scoreboard changed from 0x38 to 0x3A
- ○ Changed ID of Entity Metadata changed from 0x39 to 0x3B
- ○ Changed ID of Attach Entity changed from 0x3A to 0x3C
- ○ Changed ID of Entity Velocity changed from 0x3B to 0x3D
- ○ Changed ID of Entity Equipment changed from 0x3C to 0x3E
- ○ Changed ID of Set Experience changed from 0x3D to 0x3F
- ○ Changed ID of Update Health changed from 0x3E to 0x40
- ○ Changed ID of Scoreboard Objective changed from 0x3F to 0x41
- ○ Changed ID of Set Passengers changed from 0x40 to 0x42
- ○ Changed ID of Teams changed from 0x41 to 0x43
- ○ Changed ID of Update Score changed from 0x42 to 0x44
- ○ Changed ID of Spawn Position changed from 0x43 to 0x45
- ○ Changed ID of Time Update changed from 0x44 to 0x46
- ○ Changed ID of Title changed from 0x45 to 0x47
- ○ Changed ID of Sound Effect changed from 0x46 to 0x48
- ○ Changed ID of Player List Header And Footer changed from 0x47 to 0x49
- ○ Changed ID of Collect Item changed from 0x48 to 0x4A
- ○ Changed ID of Entity Teleport changed from 0x49 to 0x4B
- ○ Changed ID of Entity Properties changed from 0x4A to 0x4C
- ○ Changed ID of Entity Effect changed from 0x4B to 0x4D

Serverbound

- ○ Changed ID of Tab-Complete (serverbound) changed from 0x01 to 0x02
- ○ Changed ID of Chat Message (serverbound) changed from 0x02 to 0x03
- ○ Changed ID of Client Status changed from 0x03 to 0x04
- ○ Changed ID of Client Settings changed from 0x04 to 0x05
- ○ Changed ID of Confirm Transaction (serverbound) changed from 0x05 to 0x06
- ○ Changed ID of Enchant Item changed from 0x06 to 0x07
- ○ Changed ID of Click Window changed from 0x07 to 0x08
- ○ Changed ID of Close Window (serverbound) changed from 0x08 to 0x09
- ○ Changed ID of Plugin Message (serverbound) changed from 0x09 to 0x0A
- ○ Changed ID of Use Entity changed from 0x0A to 0x0B

- - Changed ID of Keep Alive (serverbound) changed from 0x0B to 0x0C
    - Changed ID of Player Position changed from 0x0C to 0x0D
    - Changed ID of Player Position And Look (serverbound) changed from 0x0D to 0x0E
    - Changed ID of Player Look changed from 0x0E to 0x0F
    - Changed ID of Player changed from 0x0F to 0x10
    - Changed ID of Vehicle Move (serverbound) changed from 0x10 to 0x11
    - Changed ID of Steer Boat changed from 0x11 to 0x12
    - Changed ID of Player Abilities (serverbound) changed from 0x12 to 0x13
    - Changed ID of Player Digging changed from 0x13 to 0x14
    - Changed ID of Entity Action changed from 0x14 to 0x15
    - Changed ID of Steer Vehicle changed from 0x15 to 0x16
    - Changed ID of Resource Pack Status changed from 0x16 to 0x18
    - Changed ID of Held Item Change (serverbound) changed from 0x17 to 0x19
    - Changed ID of Creative Inventory Action changed from 0x18 to 0x1A
    - Changed ID of Update Sign changed from 0x19 to 0x1B
    - Changed ID of Animation (serverbound) changed from 0x1A to 0x1C
    - Changed ID of Spectate changed from 0x1B to 0x1D
    - Changed ID of Player Block Placement changed from 0x1C to 0x1E
    - Changed ID of Use Item changed from 0x1D to 0x1F
- Removed show_achievement chat hover event

1.11.1 / 1.11.2 (Protocol version 316)

- Added MC|DebugNeighborsUpdate plugin channel
- New metadata ints for fireworks (#7 - boosted entity ID) and pigs (#14 - total carrot-on-a-stick boost time)
- Tipped arrow color metadata now uses -1 to indicate that the arrow is not tipped, instead of 0.

1.11 (Protocol version 315)

- Llama spit now has an entity ID (minecraft:llama_spit)
- Changed cursor position values in Player Block Placement (0x1C) from ints ranging from 0 to 15 to floats ranging from 0 to 1.
- Llamas now have a height of 1.87 instead of 1.97
- Tab Complete (clientbound) (0x0E)'s values are now sorted clientside before being displayed.
- New entities:
    - EvocationFangs (minecraft:evocation_fangs), #33. No metadata.

- - EvocationIllager (minecraft:evocation_illager), #34. One metadata field, a Boolean of unknown purposes.
    - Vex (minecraft:vex), #35. One metadata field, a Boolean of unknown purposes.
    - VindicationIllager (minecraft:vindication_illager), #36. One metadata field, a Byte of unknown purposes.
    - Llama (minecraft:llama), #103. 3 integer varint fields.
  - Added a new metadata field to shulkers.
  - Added new icons to maps:
    - 8 - far away player
    - 9 - Mansion
    - 10 - Temple
  - Added entity status #35, which plays the totem of undying animation.
  - Added shulker box and llama inventories
  - Added a block action to update shulker box user count
  - The beam generated by an end gateway when it receives a block action 1 is now magenta, instead of yellow
  - Max length for Chat Message (serverbound) (0x02) changed from 100 to 256.
  - Added entity status #34, which causes an iron golem to hide its rose (fixing MC-101642).
  - Added nitwit villager profession (ID 5)
  - Inserted action "set action bar" (id 2) to Protocol#Title (0x45)
    - Shifted the following actions: "set times and display" changed from 2 to 3, "hide" changed from 3 to 4, "reset" changed from 4 to 5"
  - Entity IDs are now in snake_case, are case insensitive, and are namespaced (i.e., prefixed with minecraft:, rather than in CamelCase).
  - Removed entity IDs for Mob (48) and Monster (49)
  - Zombies, skeletons, and horses have been split into their component entities rather than having a Type field (although the Type field still exists on Zombies, it is unused). Metadata specific to each sub entity was shifted as a result.
    - Moved status code 16 (cure zombie effect) from Zombie to Zombie Villager
  - Added "Pickup Item Count" VarInt to the end of Collect Item (0x48)
  - Changed type from an Unsigned Byte to a VarInt in Spawn Mob (0x03)

1.10.2 (Protocol version 210)

- It is again no longer required to send block entities in Chunk Data.

1.10.1 (Protocol version 210)

- Clients will now crash if a block entity is not sent in Chunk Data, meaning that they cannot be delayed to accommodate servers still using Update Block Entity (MC-103978).

1.10 (Protocol version 210)

- Removed hash field from Resource Pack Status (0x16)
- Added "Integrity" (float) and "Seed" (VarLong) fields to the MC|Struct plugin channel
- Named Sound Effect (0x19) now sends Pitch as Float instead of Unsigned Byte
- Sound Effect (0x46) now sends Pitch as Float instead of Unsigned Byte
- Added "Show Air" and "Show Bounding Box" Boolean fields to the MC|Struct plugin channel

1.9.3 / 1.9.4 (Protocol version 110)

- Chunk Data (0x20) now also sends all tile entities in the chunk (at the end of the packet)
- Removed Update Sign (clientbound) (0x46); Update Block Entity with action 9 should be used instead
- Changed ID of Sound Effect from 0x47 to 0x46
- Changed ID of Player List Header And Footer from 0x48 to 0x47
- Changed ID of Collect Item from 0x49 to 0x48
- Changed ID of Entity Teleport from 0x4A to 0x49
- Changed ID of Entity Properties from 0x4B to 0x4A
- Changed ID of Entity effect from 0x4C to 0x4B
- Added MC|StopSound plugin, used with the /stopsound command.

1.9.2 (Protocol version 109)

- Protocol version *probably* was incremented to force Realms users to update due to a bug that broke Realms.

1.9.1 (Protocol version 108)

- Changed dimension in Join Game from a byte enum to an int enum (***not VarInt***), to the benefit of Minecraft Forge
- Type in Entity Metadata is now a VarInt enum instead of a Byte enum.
  - Since there are very few actual metadata serializers, this does not break anything.

1.9 (Protocol version 107)

- Changed fixed-point ints for x, y, and z coordinates to doubles in Spawn Object (0x00), Spawn Experience Orb (0x01), Spawn Global Entity (0x02), Spawn Mob (0x03), Spawn Player (0x05), and Entity Teleport (0x4A).
- Changed byte-based fixed deltas measured in 32ndths of a block to short-based fixed deltas measured as (currentX * 32 - prevX * 32) * 128 in Entity Relative Move (0x25) and Entity Look And Relative Move (0x26). As

such, these packets are used for movements of at max 8 blocks instead of at max 4 blocks.
- Changed floats in Steer Boat (0x11) to booleans
- Added a UUID to Spawn Painting (0x04) after entity ID
- Added VarInt enum category to Named Sound Effect (0x19)
- Added VarInt enum category to Sound Effect (0x47)

Clientbound

- Removed Set Compression (0x1E) during play. Its login variant should be used instead.
- Changed ID of Change Game State from 0x1F to 0x1E
- Changed ID of Keep Alive from 0x20 to 0x1F
- Changed ID of Chunk Data from 0x21 to 0x20
- Changed ID of Effect from 0x22 to 0x21
- Changed ID of Particle from 0x23 to 0x22
- Changed ID of Join Game from 0x24 to 0x23
- Changed ID of Map from 0x25 to 0x24
- Changed ID of Entity Relative Move from 0x26 to 0x25
- Changed ID of Entity Look and Relative Move from 0x27 to 0x26
- Changed ID of Entity Look from 0x28 to 0x27
- Changed ID of Entity from 0x29 to 0x28
- Changed ID of Vehicle Move from 0x2A to 0x29
- Changed ID of Open Sign Editor from 0x2B to 0x2A
- Changed ID of Player Abilities from 0x2C to 0x2B
- Changed ID of Combat Event from 0x2D to 0x2C
- Changed ID of Player List Item from 0x2E to 0x2D
- Changed ID of Player Position and Look from 0x2F to 0x2E
- Changed ID of Use Bed from 0x30 to 0x2F
- Changed ID of Destroy Entities from 0x31 to 0x30
- Changed ID of Remove Entity Effect from 0x32 to 0x31
- Changed ID of Resource Pack Send from 0x33 to 0x32
- Changed ID of Respawn from 0x34 to 0x33
- Changed ID of Entity Head Look from 0x35 to 0x34
- Changed ID of World Border from 0x36 to 0x35
- Changed ID of Camera from 0x37 to 0x36
- Changed ID of Held Item Change from 0x38 to 0x37
- Changed ID of Display Scoreboard from 0x39 to 0x38
- Changed ID of Entity Metadata from 0x3A to 0x39
- Changed ID of Attach Entity from 0x3B to 0x3A
- Changed ID of Entity Velocity from 0x3C to 0x3B
- Changed ID of Entity Equipment from 0x3D to 0x3C
- Changed ID of Set Experience from 0x3E to 0x3D
- Changed ID of Update Health from 0x3F to 0x3E
- Changed ID of Scoreboard Objective from 0x40 to 0x3F
- Changed ID of Set Passangers from 0x41 to 0x40

- Changed ID of Teams from 0x42 to 0x41
- Changed ID of Update Score from 0x43 to 0x42
- Changed ID of Spawn Position from 0x44 to 0x43
- Changed ID of Time Update from 0x45 to 0x44
- Changed ID of Title from 0x46 to 0x45
- Changed ID of Update Sign from 0x47 to 0x46
- Changed ID of Sound Effect from 0x48 to 0x47
- Changed ID of Player List Header and Footer from 0x49 to 0x48
- Changed ID of Collect Item from 0x4A to 0x49
- Changed ID of Entity Teleport from 0x4B to 0x4A
- Changed ID of Entity Properties from 0x4C to 0x4B
- Changed ID of Entity Effect from 0x4D to 0x4C
- Click Window (0x07)'s mode field is now a VarInt enum instead of a byte enum

Clientbound

- Changed ID of Named Sound Effect (previously refered to as Sound Effect) from 0x23 to 0x19
- Changed ID of Disconnect from 0x19 to 0x1A
- Changed ID of Entity Status from 0x1A to 0x1B
- Changed ID of Explosion from 0x1B to 0x1C
- Changed ID of Unload Chunk from 0x1C to 0x1D
- Changed ID of Set Compression from 0x1D to 0x1E
- Changed ID of Set Game State from 0x1E to 0x1F
- Changed ID of Keep Alive from 0x1F to 0x20
- Changed ID of Chunk Data from 0x20 to 0x21
- Changed ID of Effect from 0x21 to 0x22
- Changed ID of Particle from 0x22 to 0x23
- Changed ID of Vehicle Move from 0x4C to 0x2A
- Changed ID of Open Sign Editor from 0x2A to 0x2B
- Changed ID of Player Abilities from 0x2B to 0x2C
- Changed ID of Combat Event from 0x2C to 0x2D
- Changed ID of Player List Item from 0x2D to 0x2E
- Changed ID of Player Position and Look from 0x2E to 0x2F
- Changed ID of Use Bed from 0x2F to 0x30
- Changed ID of Destroy Entities from 0x30 to 0x31
- Changed ID of Remove Entity Effect from 0x31 to 0x32
- Changed ID of Resource Pack Send from 0x32 to 0x33
- Changed ID of Respawn from 0x33 to 0x34
- Changed ID of Entity Head Look from 0x34 to 0x35
- Changed ID of World Border from 0x35 to 0x36
- Changed ID of Camera from 0x36 to 0x37
- Changed ID of Held Item Change from 0x37 to 0x38
- Changed ID of Display Scoreboard from 0x38 to 0x39
- Changed ID of Entity Metadata from 0x39 to 0x3A

- Changed ID of Set Passangers from 0x3A to 0x41
- Changed ID of Teams from 0x41 to 0x42
- Changed ID of Update Score from 0x42 to 0x43
- Changed ID of Spawn Position from 0x43 to 0x44
- Changed ID of Time Update from 0x44 to 0x45
- Changed ID of Title from 0x45 to 0x46
- Changed ID of Update Sign from 0x46 to 0x47
- Added Sound Event (numeric ID) with ID 0x48. Structure is VarInt for the ID; x, y, and z as ints; volume as float; and pitch as a byte.
- Changed ID of Player List Header and Footer from 0x47 to 0x49
- Changed ID of Collect Item from 0x48 to 0x4A
- Changed ID of Entity Teleport from 0x49 to 0x4B
- Changed ID of Entity Properties from 0x4A to 0x4C
- Changed ID of Entity Effect from 0x4B to 0x4D

Serverbound

- Changed ID of Teleport Confirm from 0x1D to 0x00
- Changed ID of Tab Complete from 0x00 to 0x01
- Changed ID of Chat Message from 0x01 to 0x02
- Changed ID of Client Status from 0x02 to 0x03
- Changed ID of Client Settings from 0x03 to 0x04
- Changed ID of Confirm Transaction from 0x04 to 0x05
- Changed ID of Enchant Item from 0x05 to 0x06
- Changed ID of Click Window from 0x06 to 0x07
- Changed ID of Close Window from 0x07 to 0x08
- Changed ID of Plugin Message from 0x08 to 0x09
- Changed ID of Use Entity from 0x09 to 0x0A
- Changed ID of Keep Alive from 0x0A to 0x0B
- Changed ID of Vehicle Move from 0x0B to 0x10
- Changed ID of Steer Boat from 0x1C to 0x11
- Changed ID of Player Abilities from 0x10 to 0x12
- Changed ID of Player Digging from 0x11 to 0x13
- Changed ID of Entity Action from 0x12 to 0x14
- Changed ID of Steer Vehicle from 0x13 to 0x15
- Changed ID of Resource Pack Status from 0x14 to 0x16
- Changed ID of Held Item Change from 0x15 to 0x17
- Changed ID of Creative Inventory Action from 0x16 to 0x18
- Changed ID of Update Sign from 0x17 to 0x19
- Changed ID of Animation from 0x18 to 0x1A
- Changed ID of Spectate from 0x19 to 0x1B
- Changed ID of Player Block Placement from 0x1A to 0x1C
- Changed ID of Use Item from 0x1B to 0x1D
- Added Teleport ID VarInt field to Player Position and Look (0x2E - clientbound)

- Added Teleport Confirm (0x1D - serverbound) packet, with a single VarInt for the teleport ID
- Added an unused MC|DebugPath channel

Clientbound

- Added Set Passengers (0x3A)
- Changed ID of Attach Entity from 0x3A to 0x3B
- Removed "Leash" boolean from Attach Entity - Attach entity is now used only for leashing and Set Passengers is used in all other cases.
- Changed ID of Entity Velocity from 0x3B to 0x3C
- Changed ID of Entity Equipment from 0x3C to 0x3D
- Changed ID of Set Experience from 0x3D to 0x3E
- Changed ID of Update Health from 0x3E to 0x3F
- Changed ID of Scoreboard Objectives from 0x3F to 0x40
- Changed ID of Teams from 0x40 to 0x41
- Changed ID of Update Score from 0x41 to 0x42
- Changed ID of Spawn Position from 0x42 to 0x43
- Changed ID of Time Update from 0x43 to 0x44
- Changed ID of Title from 0x44 to 0x45
- Changed ID of Update Sign from 0x45 to 0x46
- Changed ID of Player List header and footer from 0x46 to 0x47
- Changed ID of Collect Item from 0x47 to 0x48
- Changed ID of Entity Teleport from 0x48 to 0x49
- Changed ID of Entity Properties from 0x49 to 0x4A
- Changed ID of Entity Effect from 0x4A to 0x4B

Serverbound

- Added Vehicle Move (0x0B). Its structure is 3 doubles (coordinates) and then 2 floats (yaw and pitch).
- Changed ID of Player Position from 0x0B to 0x0C
- Changed ID of Player Position and Look from 0x0C to 0x0D
- Changed ID of Player Look from 0x0D to 0x0E
- Changed ID of Player from 0x0E to 0x0F
- Changed ID of Player Abilities from 0x0F to 0x10
- Changed ID of Player Digging from 0x10 to 0x11
- Changed ID of Entity Action from 0x11 to 0x12
- Changed ID of Steer Vehicle from 0x12 to 0x13
- Changed ID of Resource Pack Status from 0x13 to 0x14
- Changed ID of Held Item Change from 0x14 to 0x15
- Changed ID of Creative Inventory Action from 0x15 to 0x16
- Changed ID of Update Sign from 0x16 to 0x17
- Changed ID of Animation from 0x17 to 0x18
- Changed ID of Spectate from 0x18 to 0x19
- Changed ID of Player Block Placement from 0x19 to 0x1A
- Changed ID of Use Item from 0x1A to 0x1B

- Added Steer Boat packet (0x1C), with 2 floats as a payload.
- Changed the hitboxes of several entities
- Changed Primary Bit Mask in Chunk Data (0x20) from an Int to a VarInt (was an unsigned short in 1.8)
- Nearly all packets had their ID changed in this version
- Added a new Metadata type, Block ID (0x12), which is a VarInt: id << 4 | data
- Endermen now use Block ID for their held item, rather than two Metadata ints

Clientbound

- Changed ID of Keep Alive from 0x00 to 0x1F
- Changed ID of Join Game from 0x01 to 0x24
- Changed ID of Chat Message from 0x02 to 0x0F
- Changed ID of Time Update from 0x03 to 0x43
- Changed ID of Entity Equipment from 0x04 to 0x3C
- Changed ID of Spawn Position from 0x05 to 0x42
- Changed ID of Update Health from 0x06 to 0x3E
- Changed ID of Respawn from 0x07 to 0x33
- Changed ID of Player Position And Look from 0x08 to 0x2E
- Changed ID of Held Item Change from 0x09 to 0x37
- Changed ID of Use Bed from 0x0A to 0x2F
- Changed ID of Animation from 0x0B to 0x06
- Changed ID of Spawn Player from 0x0C to 0x05
- Changed ID of Collect Item from 0x0D to 0x47
- Changed ID of Spawn Object from 0x0E to 0x00
- Changed ID of Spawn Mob from 0x0F to 0x03
- Changed ID of Spawn Painting from 0x10 to 0x04
- Changed ID of Spawn Experience Orb from 0x11 to 0x01
- Changed ID of Entity Velocity from 0x12 to 0x3B
- Changed ID of Destroy Entities from 0x13 to 0x30
- Changed ID of Entity from 0x14 to 0x29
- Changed ID of Entity Relative Move from 0x15 to 0x26
- Changed ID of Entity Look from 0x16 to 0x28
- Changed ID of Entity Look And Relative Move from 0x17 to 0x27
- Changed ID of Entity Teleport from 0x18 to 0x48
- Changed ID of Entity Head Look from 0x19 to 0x34
- Changed ID of Attach Entity from 0x1B to 0x3A
- Changed ID of Entity Metadata from 0x1C to 0x39
- Changed ID of Entity Effect from 0x1D to 0x4A
- Changed ID of Remove Entity Effect from 0x1E to 0x31
- Changed ID of Set Experience from 0x1F to 0x3D
- Changed ID of Entity Properties from 0x20 to 0x49
- Changed ID of Chunk Data from 0x21 to 0x20
- Changed ID of Unload Chunk from 0x22 to 0x1C
- Changed ID of Multi Block Change from 0x23 to 0x10
- Changed ID of Block Change from 0x24 to 0x0B

- Changed ID of Block Action from 0x25 to 0x0A
- Changed ID of Block Break Animation from 0x26 to 0x08
- Changed ID of Explosion from 0x27 to 0x1B
- Changed ID of Effect from 0x28 to 0x21
- Changed ID of Sound Effect from 0x29 to 0x23
- Changed ID of Particle from 0x2A to 0x22
- Changed ID of Change Game State from 0x2B to 0x1E
- Changed ID of Spawn Global Entity from 0x2C to 0x02
- Changed ID of Open Window from 0x2D to 0x13
- Changed ID of Close Window from 0x2E to 0x12
- Changed ID of Set Slot from 0x2F to 0x16
- Changed ID of Window Items from 0x30 to 0x14
- Changed ID of Window Property from 0x31 to 0x15
- Changed ID of Confirm Transaction from 0x32 to 0x11
- Changed ID of Update Sign from 0x33 to 0x45
- Changed ID of Map from 0x34 to 0x25
- Changed ID of Update Block Entity from 0x35 to 0x09
- Changed ID of Open Sign Editor from 0x36 to 0x2A
- Changed ID of Statistics from 0x37 to 0x07
- Changed ID of Player List Item from 0x38 to 0x2D
- Changed ID of Player Abilities from 0x39 to 0x2B
- Changed ID of Tab-Complete from 0x3A to 0x0E
- Changed ID of Scoreboard Objective from 0x3B to 0x3F
- Changed ID of Update Score from 0x3C to 0x41
- Changed ID of Display Scoreboard from 0x3D to 0x38
- Changed ID of Teams from 0x3E to 0x40
- Changed ID of Plugin Message from 0x3F to 0x18
- Changed ID of Disconnect from 0x40 to 0x19
- Changed ID of Server Difficulty from 0x41 to 0x0D
- Changed ID of Combat Event from 0x42 to 0x2C
- Changed ID of Camera from 0x43 to 0x36
- Changed ID of World Border from 0x44 to 0x35
- Changed ID of Title from 0x45 to 0x44
- Changed ID of Set Compression from 0x46 to 0x1D
- Changed ID of Player List Header And Footer from 0x47 to 0x46
- Changed ID of Resource Pack Send from 0x48 to 0x32
- Changed ID of Boss Bar from 0x49 to 0x0C
- Changed ID of Set Cooldown from 0x0A to 0x17

Serverbound

- Changed ID of Keep Alive from 0x00 to 0x0A
- Changed ID of Use Entity from 0x02 to 0x09
- Changed ID of Player from 0x03 to 0x0E
- Changed ID of Player Position from 0x04 to 0x0B
- Changed ID of Player Look from 0x05 to 0x0D

- Changed ID of Player Position And Look from 0x06 to 0x0C
- Changed ID of Player Digging from 0x07 to 0x10
- Changed ID of Use Item from 0x08 to 0x1A
- Changed ID of Player Block Placement from 0x09 to 0x19
- Changed ID of Held Item Change from 0x0A to 0x14
- Changed ID of Animation from 0x0B to 0x17
- Changed ID of Entity Action from 0x0C to 0x11
- Changed ID of Steer Vehicle from 0x0D to 0x12
- Changed ID of Close Window from 0x0E to 0x07
- Changed ID of Click Window from 0x0F to 0x06
- Changed ID of Confirm Transaction from 0x10 to 0x04
- Changed ID of Creative Inventory Action from 0x11 to 0x15
- Changed ID of Enchant Item from 0x12 to 0x05
- Changed ID of Update Sign from 0x13 to 0x16
- Changed ID of Player Abilities from 0x14 to 0x0F
- Changed ID of Tab-Complete from 0x15 to 0x00
- Changed ID of Client Settings from 0x16 to 0x03
- Changed ID of Client Status from 0x17 to 0x02
- Changed ID of Plugin Message from 0x18 to 0x08
- Changed ID of Resource Pack Status from 0x19 to 0x13
- Added Unload Chunk packet (0x22), with two ints for the chunk x and z coordinates.
- Changed ID of multi-block change from 0x22 to 0x23
- Changed ID of block change from 0x23 to 0x24
- Changed ID of block action from 0x24 to 0x25
- Changed ID of block break animation from 0x25 to 0x26
- Removed Map Chunk Bulk (0x26)
- Changed Update Sign (0x13 - serverbound) from being 4 chat components to 4 Strings. The clientbound packet still uses chat components.
- Changed the Boolean metadata for whether a zombie is a zombie villager to a VarInt which is 0 for normal zombie or Profession + 1 for a zombie villager
- Changed primary bit mask in Chunk Data (0x21) from a short to an Int
- Significantly reworked Map Chunk Bulk (0x26)
- Added Set Cooldown (0x4A)
- Added assume command boolean to Tab Complete (0x15), before the existing "has position" boolean.
- Added tracking position boolean to Map (0x34)
- Changed entity metadata format from a single byte for both type and index to several bytes:

	Type	Meaning

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

- Remapped metadata types. These types match the final version except that BlockID is missing.

Value of Type field	Type of Value field	Notes
0	Byte	
1	VarInt	
2	Float	
3	String	

4	Chat	
5	Slot	
6	Boolean	
7	Rotation	3 floats: rotation on x, rotation on y, rotation on z
8	Position	
9	OptPosition (Boolean + Optional Position)	Position is present if the Boolean is set to true
10	Direction (VarInt)	???
11	OptUUID (Boolean + Optional UUID)	UUID is present if the Boolean is set to true

- Added DragonFireball entity

Clientbound

- Changed Slot Id from a short to a VarInt enum in Entity Equipment (0x04)
- Removed Current Item short from Spawn Player (0x0C)
- Added Entity UUID after entity ID to Spawn Object (0x0E)
- Spawn Object always sends velocity, even if data is 0
- Added Entity UUID after entity ID to Spawn Mob (0x0F)
- Removed Update Entity NBT Packet (0x49)
- Added Boss Bar packet (0x49)

Serverbound

- Added VarInt enum for selected hand in Use Entity (0x02); only sent if type is interact or interact at
- Added swap item in hand (6) as a status for Player Digging (0x07)
- Added Use Item (0x08) packet with a VarInt enum for the selected hand
- Changed ID of Player Block Placement from 0x08 to 0x09

- Face for Player Block Placement is now a VarInt enum instead of a byte
- Replaced held item (slot) with VarInt enum selected hand in Player Block Placement
- Changed ID of Held Item Change from 0x09 to 0x0A
- Changed ID of Animation from 0x0A to 0x0B
- Added VarInt Enum selected hand to Animation
- Changed ID of Entity Action from 0x0B to 0x0C
- Removed Open inventory (6) from valid values for Entity Action's Action enum
- Changed ID of Steer Vehicle from 0x0C to 0x0D
- Changed ID of Close Window from 0x0D to 0x0E
- Changed ID of Click Window from 0x0E to 0x0F
- Changed ID of Confirm Transaction from 0x0F to 0x10
- Changed ID of Creative Inventory Action from 0x10 to 0x11
- Changed ID of Enchant Item from 0x11 to 0x12
- Changed ID of Update Sign from 0x12 to 0x13
- Changed ID of Player Abilities from 0x13 to 0x14
- Changed ID of Tab Complete from 0x14 to 0x15
- Changed ID of Client Settings from 0x15 to 0x16
- Added VarInt enum main hand to Client Settings
- Changed ID of Client Status from 0x16 to 0x17
- Client Status is now used to signify that the client has opened its inventory, rather than to just award the "Taking Inventory" achievement
- Changed ID of Plugin Message from 0x17 to 0x18
- Changed ID of Spectate from 0x18 to 0x19
- Changed ID of Resource Pack Status from 0x19 to 0x1A

Entity metadata

There may be other entity metadata changes that were missed in this snapshot

- Removed the 0x10 (Eating/drinking/blocking) flag from Flags (0?) in Entity.
- Added Hand States (5?) to Living.

1.8.x (Protocol Version 47) Current Goal & Working On

- New metadata type, 7 (Rotation), 12 bytes (3 floats, Pitch, Yaw, and Roll), used on armor stand
- Added new fields to Tab-Complete (Serverbound)
- Added new Update Entity NBT packet
- Added three new fields to Use Entity
- The length prefix on the payload of Plugin Message has been removed (Both ways)
- Added new Resource Pack Send packet
- Added new Resource Pack Status packet
- Added VarLong data type
- Changed a few fields in World Border to VarLong
- Changed the type of Keep Alive ID from Int to VarInt (Clientbound)

- Fix the length prefix of Plugin Message so that its a Varint instead of an unsigned short
- Added "Reduced Debug Info" boolean to Join Game
- Added "Long Distance" boolean to Particle
- Uncompressed NBT
- Added Display name fields to Player List Item
- New 'Player List Header/Footer' packet
- Changed Chunk packets to remove compression
- Added packets to toggle compression/set threshold
- Allowed compression for the whole protocol
- Changed the Maps packet
- Changed Multi Block Change to using packed block ids
- Changed Block Change to using packed block ids
- Bug fix
- Changed chunk sending
- Added boolean field to all entity movement packets
- Update Sign now uses Chat
- All byte arrays have VarInt length prefixes instead of short
- Spawn Player changes
- Player list item changes
- Added new packet 'Title'
- Changed the Particle's 'Particle Name' to an int
- Added a new field to Particle
- Rewrote Player List Item
- Added SET_WARNING_TIME and SET_WARNING_BLOCKS to World Border
- Added new serverbound packet Spectate
- Bugfix
- Added 'INITIALIZE' action to World Border
- Increased the max payload size of 'Plugin Message' from 32767 to 1048576 (Broken because of incorrect data type)
- Added new packet 'World Border'
- UUIDs now include the '-'s
- Added new field 'Type' to Scoreboard Objective
- Added two new fields to Teams

Clientbound

- Added new field 'Hide Particles' to Entity Effect
- Added new fields to Spawn Player
- New packet 'Camera'
- New packet 'Combat Event'
- Spawn Painting now uses the 'Position' data type
- Changed Spawn Painting's Direction type to Unsigned Byte
- Encoding for 'Position' changed
- Changed Entity Equipment's EntityId type to VarInt
- Changed Update Health's Food type to VarInt

- Changed Use Bed's EntityId type to VarInt
- Changed Collect Item's EntityId(s) types to VarInt
- Changed Entity Velocity's EntityId type to VarInt
- Changed Destroy Entities' Length type to VarInt
- Changed Destroy Entities' EntityIds type to VarInt array
- Changed Entity's EntityId type to VarInt
- Changed Entity Relative Move's EntityId type to VarInt
- Changed Entity Look's EntityId type to VarInt
- Changed Entity Look and Relative Move's EntityId type to VarInt
- Changed Entity Teleport's EntityId type to VarInt
- Changed Entity Head Look's EntityId type to VarInt
- Changed Entity Metadata's EntityId type to VarInt
- Changed Entity Effect's EntityId type to VarInt
- Changed Entity Effect's Duration type to VarInt
- Changed Remove Entity Effect's EntityId type to VarInt
- Changed Set Experience's Level type to VarInt
- Changed Set Experience's Total Experience type to VarInt
- Changed Entity Properties's EntityId type to VarInt
- Changed Entity Properties's List Length type to VarInt
- Changed Player List Item's Ping type to VarInt
- Changed Update Score's Value type to VarInt
- Changed Teams' Player count type to VarInt
- Spawn Position now uses the 'Position' data type
- Use Bed now uses the 'Position' data type
- Block Change now uses the 'Position' data type
- Block Action now uses the 'Position' data type
- Block Break Animation now uses the 'Position' data type
- Effect now uses the 'Position' data type
- Sign Update now uses the 'Position' data type
- Update Block Entity now uses the 'Position' data type
- Sign Editor Open nows uses the 'Position' data type

Serverbound

- Removed 'HeadY' from Player Position And Look
- Changed Keep Alive's Keep Alive ID type to VarInt
- Changed Use Entity's Target type to VarInt
- Changed Use Entity's Mouse type to Unsigned Byte
- Removed everything from Animation
- Changed Entity Action's EntityId type to VarInt
- Changed Entity Action's Action ID type to Unsigned Byte
- Changed Entity Action's Values
- Changed Entity Action's Jump Boast type to VarInt
- Merged Steer Vehicle's Jump and Unmount into a Bit Field
- Changed Client Status's Action ID type to Unsigned Byte
- Player Digging now uses the 'Position' data type

- Player Block Placement now uses the 'Position' data type
- Update Sign now uses the 'Position' data type
- Client Settings 'show cape' type changed from boolean to unsigned byte
- Added 'Position' to Chat Message Clientbound
- Remove Player Position And Look's 'OnGround' clientbound
- Added 'Flags' to Player Position And Look clientbound
- Changed Open Inventory's 'Inventory Type' type from byte to string
- Added Server Difficulty
- Removed Client Settings' 'Difficulty'

1.7.6 - 1.7.10 (Protocol Version 5) In Testing

- Stuff to test for:
    - Skins and capes are now distributed through servers.
    - Servers send signed blobs to show skins.
    - 1.7.9 - Added support for left and right leg and arm textures.
    - Loosened restrictions so NPCs and similar are still possible for now.
- UUIDs now include the '-'s
- Added new fields to Spawn Player

1.7.4 / 1.7.5 (Protocol Version 4) Current Version of Craft.Net