Breakdown of the character information packets sent by the server during login.

Packet information provided by

Sting

A varying number of packets are sent during character login. These follow a set pattern however.

Each packet is 0xe5 (+ the packet header) in size. The set of packets is broken down into "sections". The first section begins with byte 0x12 (the bytes before this *seem* to be the header and some other constant data).

The sections are:

01 - byte 0x12,
0x00 0a bytes long (bytes 0x13 and 0x14 show number of bytes to follow),
 This section includes details about the character subclass (byte 0x16) and the character ID (bytes 0x19 - 0x1c)

02 - byte 0x1f,
0x00 1c bytes long (bytes 0x20 and 0x21 show number of bytes to follow),
 This section includes information about the character's current (and maximum) health, stamina, and psi pool. It also includes a byte showing the character's current synaptic impairment (byte 0x3a). This byte is usually "64", meaning 100 in decimal. If you had 2% SI, the byte would be shown as "62" (100-2).

03 - byte 0x3e
0x00 3c bytes long (bytes 0x3f and 0x40 show the number of bytes to follow),
 This is the section showing all the main stats, ie. STR, DEX, CON, INT and PSI. It also shows current XP for each stat, points available, max stat, and growth rate for that class.

04 - byte 0x7d
0x00 5e bytes long (bytes 0x7e and 0x7f show bytes following),
 This section has all the subskills, and the points cost to raise each subskill.

05 - byte 0xde
variable length (bytes 0xdf and 0xe0 show how many bytes follow, and bytes 0xe1 and 0xe2 show how many different items there are),
 This section lists the items in the character's main inventory. This is in the format:

0x0000	number of bytes to follow for this items
0x00	null (or, so it appears)
0x00	location (squares across, starting at 00)
0x00	location (squares down, starting at 00)
0x0000	item
0x00	item "class" - still working out some of the details of this byte!

 There will be other bytes as well, depending on the type of item.
 (Note: if an item is a weapon or spell there will be a set of 6 bytes following 2 bytes after the item class. These are in order: current condition, damage, frequency, handling, range, and maximum condition)

Immediately after the last item in the main inventory, will be the beginning of:

06 - this byte will need to be located, as it depends on the length of the previous section,
0x0000 - number of bytes to follow,
0x00 - number of items to follow,
        This section then lists items in the following order:

        0x00 - 0x09 - Items in quickbelt
        0x0c - 0x18 - Items in processor window
        0x1a - 0x26 - Implants
        0x27 - 0x2b - Armour

        Items follow roughly the same format as items in the main inventory, but do not have the
        "null" byte, and location is 0x0000 format.

After this comes:

07 - this byte will need to be located, as it depends on the length of the previous section,
then follows 4 bytes of unknown use
0x0000 - number of bytes to follow
0x00 - number of items to follow
        This section lists all the items in the character's go guardian. Items are listed in order.

        Items follow the same format as other items, but do not have a "location" byte at all.

Then comes the "*mad section*". Section 8 appears to be the section where KK put everything it didn't
have a better home for!

08 - this byte will need to be located, as it depends on the length of the previous section,
0x0000 - number of bytes to follow
0x0a - No idea why it is this. Originally thought it might point to a faction, but seems the same
value for all
0x00000000 - Cash
0x0000 - Number of GRs the character has tagged
0x04 - Not sure, but I am guessing this byte shows how many bytes each GR uses
        After this will be listed all the GRs that the character has tagged. Information about GRs can
        be found in *pak_respawn.def*. The format for these is xx xx yy zz, where xx xx is the world
        map the GR is in, yy is an unknow currently, and zz is the safety factor for that particular
        GR.

        After the last GR come the bytes 04 04 00 - again, I currently do not know what these mean,
        but they seem the same for all.

        Then comes either 0x00 or 0x01. If the character has no-one listed in their direct channel it
        will be 0x00. If they have someone there, it will be 0x01, followed by the 4 byte character ID
        of that person.

        Next comes a byte listing the number of buddies on the character's buddy list. If none, it will
        be 0x00. Otherwise, it will then list the buddies by their 4 byte character IDs.

        After this comes 0x00. Then follow bytes 17 and 18 from the first section (the two bytes
        after the subclass byte). Then come 8 bytes of 0x00.

This is followed by the character's class/gender, as listed in *pak_characters.def*, followed by 0x00. After this come 3 bytes for the character's head, torso, and legs.

The next byte I currently have no idea about.

After this comes the character's primary (GR active) apartment. This is 4 bytes long. I have not checked if this is added when the character is first created, or later. I would assume it is probably made before they even enter MC5. I will try to remember to check my files for this later.

Then come the following bytes: 01 00 00 00 00

And at last... here comes section...

09 - again, needs to be found,
0x0000 - bytes following (usually 62 bytes)
    This section appears to be all about faction sympathy and soullight - I am currently investigating how this is implemented.

0a - follow the trail!
0x0000 - length in bytes
    This appears to be clan related, though I have no idea how. If a character is not in a clan, the length is always 0x0000, and goes straight to section...

0b - find it if you can
    This section includes data about the character's subclass again, and ends with the character's ID. There are several bytes I have yet to determine as well.