
Subject: Resource Manager

Posted by [trunskgb](#) on Tue, 25 Sep 2012 16:50:29 GMT

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Why is it, that if I have a map in my data folder, lets say "C&C Mars", and I join a server hosting that map, the resource manager STILL downloads the map?

Are server owners now editing ALL these fan maps that's been released over the years, negating the fact that I took time to download it myself and install it? (I have not downloaded maps in awhile as I have them on another hard drive).

If this is the case, then this REALLY sucks because despite my fast connection, some servers only upload it to me very slow.

The resource manager tool is wonderful, but if server owners are not editing ALL these maps, well hell, there's got to be now like a bunch of different versions of these maps out there now.

Subject: Re: Resource Manager

Posted by [Ethenal](#) on Tue, 25 Sep 2012 17:01:16 GMT

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Not to hijack your topic, but great job on the resource manager! I joined a modified C&C_Tutorial while it was changing to the next map, and it began downloading Tutorial and then switched to C&C_Joipa when it changed the map without a hitch.

This is a very good question, though. I've been wondering that myself.

Either way, keep up the good work!

Subject: Re: Resource Manager

Posted by [trunskgb](#) on Tue, 25 Sep 2012 22:23:58 GMT

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Thank you for mentioning that Ethenal, that's a nice feature as well. Also, any map that it begins to download, if it gets disconnected or something happens, it will pickup right where it left off, just like a torrent file.

I also have another question. If it has to download a map in order for you too join, how come it doesn't keep downloading after each map ends, and the next begins?

Subject: Re: Resource Manager

Posted by [EvilWhiteDragon](#) on Tue, 25 Sep 2012 23:01:56 GMT

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While I'm not 100% sure on the technical implementation of the resource manager, I am fairly confident that it downloads the next map while playing.

Subject: Re: Resource Manager

Posted by [trunkskgb](#) on Wed, 26 Sep 2012 00:55:11 GMT

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Hmm, could that possibly slow down your connection in-game? Add to the lag?

Subject: Re: Resource Manager

Posted by [StealthEye](#) on Wed, 26 Sep 2012 20:05:00 GMT

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The way it's currently implemented, the files are downloaded separately instead of as a single .mix. Downloaded files are stored in the TT filesystem (TTFS) with some metadata to determine which files belong to which packages (the .tpi files in the TTFS). Therefore, having a .mix with the same files is not identical to having the files and metadata in the TTFS. There are various reasons why it was implemented this way:

- .mix archives often contain the same files. For example, almost every map has the same version of scripts.dll (or one of the few versions of custom scripts.dll). I found that for the ubermappack, iirc, about 85% of the space was wasted by duplication. In the TTFS, there are no duplicate files, which makes it smaller and reduces the amount of data to be downloaded for new packages.
- Multiple variants of the same map (with the same name) could not be stored and referenced properly using .mix files. This could for example let one server install a cheat-modified map on your client, and then your client would use it on other servers.
- There were several problems loading and unloading .mix archives dynamically, so we either had to fix .mix packages or come up with something new (TTFS).

Note that, initially, we wanted to store downloaded files in a virtual filesystem for efficient access, and we wanted to make stand-alone packages that would be easy to download and install. In fact, we wanted to provide some kind of "store" in the launcher, where you would be able to list and download maps.

As for lag caused by downloading: it will not really decrease the server to client data stream, but it can make it less reliable (packets not arriving, causing latency) if your connection is exhausted. The download should theoretically automatically throttle back in that case, although I have never carefully studied this.

Subject: Re: Resource Manager

Posted by [trunkskgb](#) on Thu, 27 Sep 2012 14:28:06 GMT

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Ah,thanks Stealth. Always a boatload of information.
