GTTA

Installation & Configuration Manual

Version 1.11

General

This document describes the installation & configuration process of GTTA Workstation. Please note that some features are version-specific – in that case you will see a corresponding note.

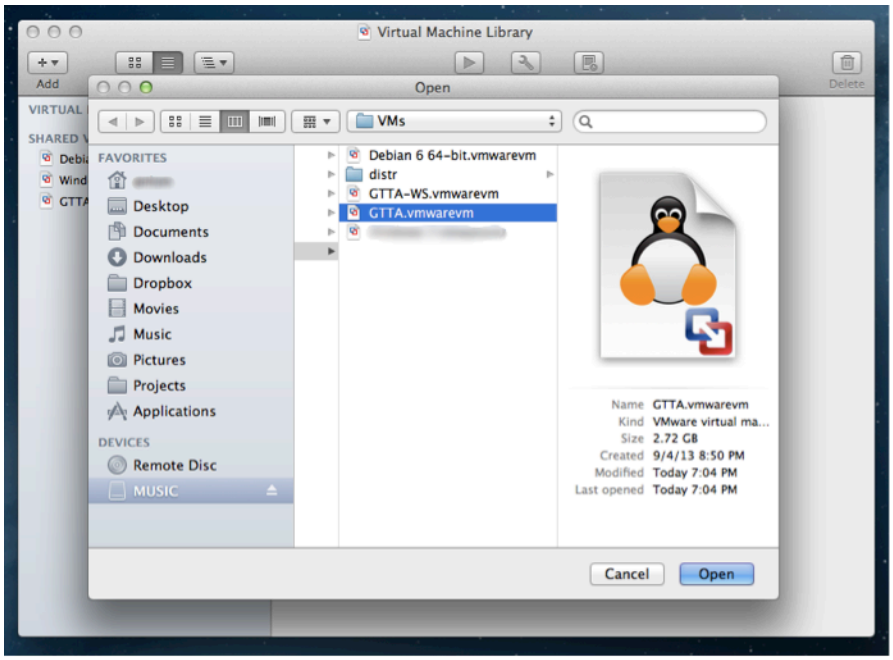
Prerequisites

In order to successfully install and use GTTA Workstation you should have the following:

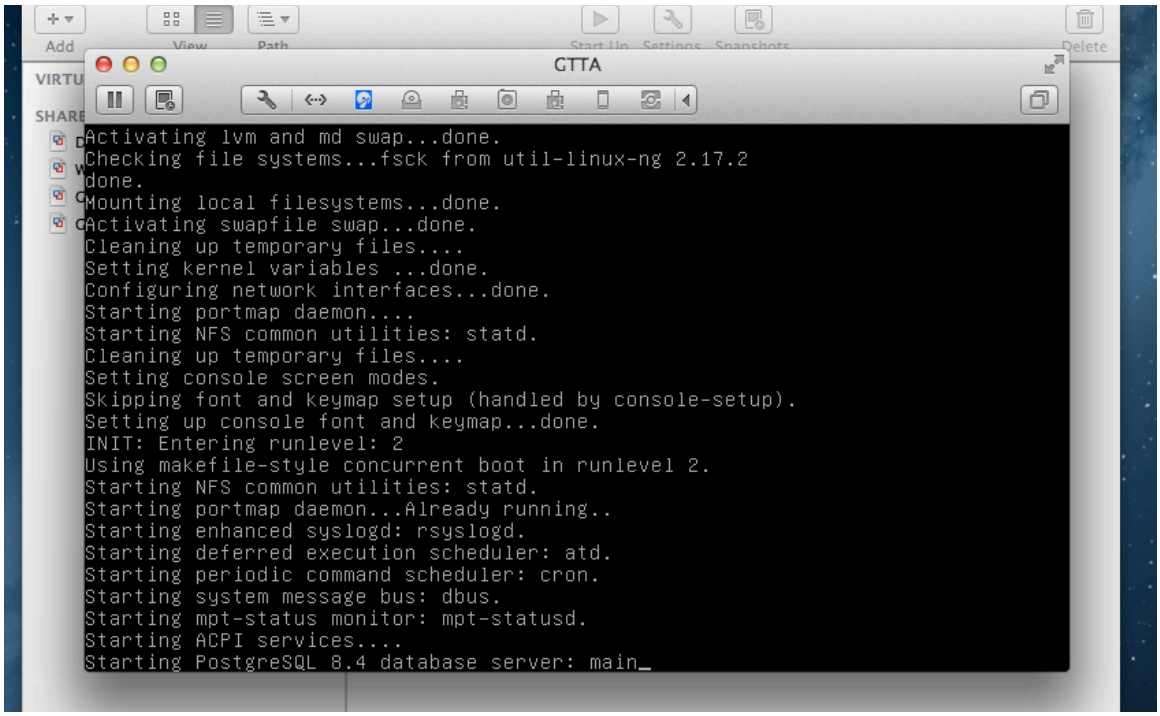
1. VMware virtualization software – VMware Workstation, VMware Player or VMware Fusion. GTTA is able to run on the following VMware product versions:
    a. GTTA **1.0 – 1.10**:
        i. ESXi 5.1+
        ii. Fusion 5+
        iii. Workstation 9+
        iv. Player 5+
    b. GTTA **1.11+**:
        i. ESX/ESXi 4+
        ii. Fusion 2+
        iii. Workstation 6.5+
        iv. Player 3+
        v. Server 2+
2. GTTA Workstation distributive – archived virtual machine image for VMware (file named gtta-1.11.zip – the version number may differ in your case).

Installation

1. Extract the virtual machine image from the archive. Make sure that you have enough disk space – the extracted virtual machine may occupy up to 10 Gb. After you extract the archive, you will see a `GTTA.vmwarevm` folder that contains the virtual machine and all required files.
2. Open your VMware virtualization software.
3. Go to "File" ➔ "Open" menu item – there you will see a file opening dialog. Now find the extracted virtual machine image and press "Open". If you're on Windows or Linux, then you should open the `GTTA.vmwarevm/GTTA.vmx` file. If you're using Mac OS X, then the extracted image will look like a single file and you should just choose `GTTA.vmwarevm` and open it. VMware software will add this virtual machine to your VMware library.



4. By default the virtual machine is configured to use the NAT networking mode (**starting from GTTA 1.11**, the previous versions had bridged networking by default). If you are planning to give access to GTTA to other people on your network, then you should use the "bridged" networking mode. You can find how to do this in the VMware software manual. Make sure that you do this before booting the system.
5. Now choose the virtual machine in your library and press "Play" button to start the machine. GTTA Workstation will start booting.

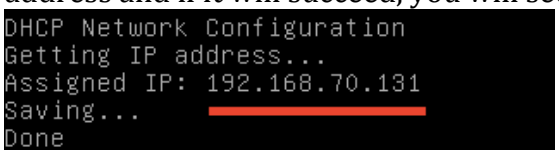


6. After a while the system will start a GTTA configuration script – it will ask you to enter some settings that are required to operate in your environment.

   The configuration script will pass through the following steps:

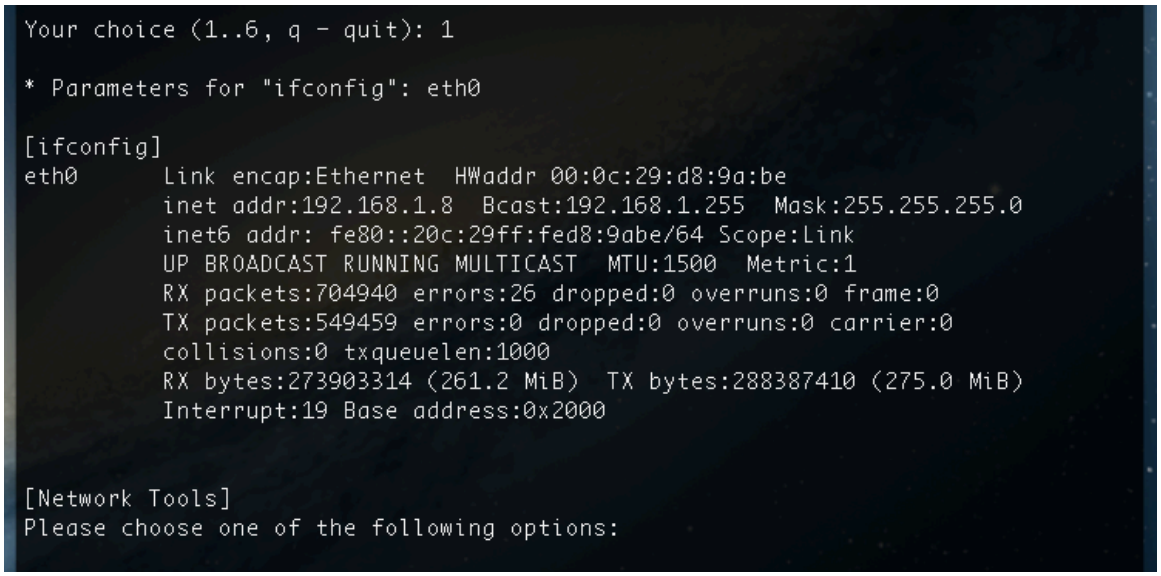
   - Network Configuration. On this step you should configure and test the system network settings, so it will be accessible from all clients that should have access to this GTTA Workstation instance. There are 2 options that you can choose. In order to choose the selected option, press the number in front of this option and press "Enter". You have the following options:
     a. Manual Network Configuration – use this only if your VM has the "bridged" networking mode and you have no DHCP servers in your network. If you will choose this, you will have to enter the workstation IP address, network mask and gateway IP address. Please make sure that you assign an IP address that is in the same subnet of your current network. For example, your physical computer's address could be 192.168.1.9, your router address could be 192.168.1.1 and you have no DHCP in the network. So you should enter these settings:
        - IP address – 192.168.1.100
        - Network mask – 255.255.255.0
        - Gateway address – 192.168.1.1

        By default the system's address is 192.168.1.100, so if you are in the same subnet and this IP address is free, you can leave the default settings by pressing "Enter" on the corresponding fields.
        Please note, that if you are using NAT networking mode, then your NAT network differs from the one that your physical computer is connected to. Usually, VMware's NAT network is 192.168.70.0/24 (with 192.168.70.1 assigned to the host computer), but your settings may be different. Please refer to VMware software manual for more information.
     b. DHCP Configuration – use this if you have a DHCP server that will assign an IP address for your workstation automatically. Also if you are using NAT networking mode for your virtual machine, you may use this even if there is no DHCP server in your network, since VMware software provides its own DHCP server for NAT connections.
        After you choose this option, the system will attempt to obtain an IP address and if it will succeed, you will see a new address on the screen.

     c. **(GTTA 1.11+)** Network Tools – use this option to test and change your network settings using standard Linux tools. The system currently supports 6 network tools – `ifconfig`, `route`, `ip`, `iptables`, `ping` and `traceroute` – this set should be enough to cover almost all network configuration and testing tasks.

Each tool prompts you to enter additional arguments – `route` and `ifconfig` tools will work without any, while others will require you to enter at least one argument. Please refer to corresponding tool manual pages for information on how to use them.



- Domain Configuration. On this step you should set the system domain name that will be used when you access your GTTA Workstation through the web browser. You may choose any domain name that you wish. The default domain name is `gtta`, you may leave it as it is.
  Attention! GTTA doesn't have a build-in name server, so after you set a desired domain name, you should add a corresponding record to a 3rd party DNS server within your network. If you have no DNS server, then you will need to add a domain record to the `hosts` file. This file's path is:
  a. Windows - `C:\Windows\system32\drivers\etc\hosts`
  b. Unix-like systems (Linux, Mac OS X, etc.) - `/etc/hosts`

- Adding Administrative Account. On this step the system will create an admin account for GTTA Workstation. It will ask you to enter a desired email & password for this account.
- Root Certificate Generation. The system won't need any actions on your side on this step – it will just silently generate a root certificate for user client-side certificates. These certificates can be used when you log in to the system, as an additional security measure.

7. After configuration process is complete, you will see a usual Linux login prompt. That means, that the system is booted up and ready to go.
8. Open your browser and type in the following URL: https://gtta/ (the domain name may differ, depending on your settings provided during the system configuration). You will see a warning about invalid SSL certificate. Ignore that warning and proceed to the URL.
9. Use your admin login & password to enter the system.
10. Go to the "System" -> "Settings" menu and enter Workstation ID and Workstation Key there. This step is required to be able to receive and install software updates.
11. Now your system is ready to use.

Configuration

You may change the virtual machine configuration any time you wish by using GTTA configuration utility. This utility allows you to do the following:

- Configure and test network
- Change domain settings
- Add new admin account

There are 2 ways to configure your virtual machine:

1. Every time when you boot up your virtual machine, the system will start a GTTA configuration utility. It will allow you to change the system settings even if you can't access GTTA through the network. If you will not choose any configuration option within 10 seconds, the system will continue the normal booting process.
2. When the system is running, you can connect to it via SSH using user `gtta` and private RSA key (file named `gtta-ssh` or `gtta-ssh.ppk` – you can find them in the Appendix section below). The system will launch the configuration utility immediately after you connect to it via SSH.
   If you are using Linux or Mac OS X, then you can use the standard command-line client OpenSSH. The command in terminal will look like this:

   ```
   ssh -i /path/to/gtta-ssh gtta@domain
   ```

   Here *domain* stands for your configured GTTA domain name or IP address.

   If you are using Windows, then you may use the following SSH clients (name in bold means that the software is free):

   - **PuTTY** - http://www.chiark.greenend.org.uk/~sgtatham/putty/

This software uses its own format for private keys, so you will need to use a key named `gtta-ssh.ppk` instead of `gtta-ssh`.

- **TTY Emulator** - http://www.ttyemulator.com/
- Private Shell – http://privateshell.com
- ZOC - http://www.emtec.com/zoc/
- eSSH - http://www.ecodesoftware.com/products/esh.html

You can use any software listed above. Please specify the following settings when connecting to GTTA via SSH:

- Hostname – the one you specified during the system configuration
- Port – 22
- Username – gtta
- Authentication Method – Public Key
- Private Key File – `gtta-ssh` (or `gtta-ssh.ppk` for PuTTY – see in Appendix)

3. **(GTTA 1.11+)** If you are not able to connect to GTTA using network and you've missed the configuration utility timeout on system startup, you can log into the system from the VMware main window. As you can't use private keys in local console, you will have to log in using these details:
   - Login: `gtta`
   - Password: `veni-vidi-gtta`

Troubleshooting

Sometimes you can encounter connectivity issues, because of the particular network environment features or wrong VM configuration. This section contains the most frequent issues we met.

- *I can't connect to GTTA*
  - GTTA is installed on my computer and it **should not** be available to other computers on my network
    - **GTTA 1.0 – 1.10**: switch your VM networking mode to NAT ("Share with my Mac" in Mac OS X and VMware Fusion) and select a DHCP network configuration in GTTA setup utility.
    - **GTTA 1.11+**: make sure that you have your VM's networking mode set to NAT ("Share with my Mac" in Mac OS X and VMware Fusion) and select a DHCP network configuration in GTTA setup utility.
  - GTTA runs on my computer or on the server and it **should** be available to other computers on my network.
    - GTTA 1.0 – 1.10: make sure that you have your VM's networking mode set to "bridged". Then launch the GTTA configuration utility (see the "Configuration" section above) and set the appropriate network settings – choose "Manual Configuration" if you have no DHCP server on your network, "DHCP" otherwise.

        - GTTA 1.11+: switch your VM networking mode to "bridged". Then launch the GTTA configuration utility (see the "Configuration" section above) and set the appropriate network settings – choose "Manual Configuration" if you have no DHCP server on your network, "DHCP" otherwise.
    - My host is connected to the VPN and I want GTTA to be available to other hosts on the VPN. Unfortunately, at the moment GTTA is not able to work within Virtual Private Networks.
    - I don't know what I want, just make it work.
        - **GTTA 1.0 – 1.10**: switch your VM networking mode to NAT ("Share with my Mac" in Mac OS X and VMware Fusion) and select a DHCP network configuration in GTTA setup utility.
        - **GTTA 1.11+**: please make sure that you have your VM's networking mode set to NAT ("Share with my Mac" in Mac OS X and VMware Fusion) and select a DHCP network configuration in GTTA setup utility.
    - Nothing helps anyway. Please contact us and we will try to help you with your particular network configuration.
- *I can't connect to GTTA through the domain name I specified in configuration, but it connects through the IP address.*
  GTTA doesn't have a built-in name server, so you have to add a domain record either to your network's DNS server or to your local hosts file. Try to ping GTTA by domain name or close and open your browser again.
- *My browser says that GTTA's certificate is not trusted.*
  That's ok – GTTA's SSL certificate is self-signed – the system generates it during the first setup.
- *The GTTA VM bootup log says that PostgreSQL has failed to start*.
  That's not a big deal – sometimes PostgreSQL takes too long to start up (more than 10 seconds), so the initialization script shows an error message, but the PostgreSQL server does start up a bit later after that. That issue could occur because of small host performance or very strict VM settings. For example, you can try to increase the number of CPU cores available for GTTA or add more RAM to your VM (please refer to VMware user manual on how to do that).

Appendix

gtta-ssh

User's private key file for connecting through SSH – fits all SSH clients except PuTTY.

```
-----BEGIN RSA PRIVATE KEY-----
MIIEpAIBAAKCAQEAm1WPJfR1+063kk4vY8UMc5vb7dFXA1H1pTRP+F5kV3xW3P6x
D+yKfcAg+wDNqZEqILOWEubIDTrwiXFzk7ZHOdoczV8bvsvlrF6bRMsKYayrZqJO
EdcOFmAIHLRMFZ76awwTbheLbJjmIJvg++1KfIk2x44u154wR+hb7F9H2YVcmeEs
ZfUi+Zal1raRHxodb1ru2kt/sxSI3glOLRGqhf8iGMqXAt1aRtFpi/lSDcfEv5K5
BMrPSAZCQcdBH5oRqjkZcxBdriMqsQ2lR/9mP+6y38UQ8jfnNJ6KZrVJyQdsjrn1
dOytHZcd/1GAdPbatbXonZ17cjVLGB+Zwr/sGwIDAQABAoIBACWkpF4kUfsm5mG0
RNO+yvexS6jkVFvfntH8TWz5IwP4g+xmZG5hemZjCxsI5M40+aqXGsVV3CEoqWYF
cmbXg4dHjjdO1yBztSMCgko3kjp9Z8QljRnRrf5KI20hXFbZAgKzGHpThlw46Xv5
ippCtQxdDENr93oVQcoLS0uLA5R41oFEqZqvriGR5rmgK286Hi+dE6ihaANxXT03
nq0EfHY5mJ3RjmXcbrDCQk7nhWxlPL/kP+lQ0389vrI7Yv0UYtKG3SCjcr49hjc6
sFXrNGx6AdW4VYMTjcppzCDU4aCEbXPj+0/Gsb6TOJ2QPQbC7dIbBie3Ci1r2vuK
bCMDBzECgYEAyfQuSNqtmXpwl7Gep8m0S456QmWNt1ZzrB0PoguWbQHlgVIixEOU
xxQswiOar3nPdMFAo5GCAFnUjfhgRJEOMLhmvScWwyyjXQtg4wINs+QBxM8xdHgm
Hbji17ZLIehzQthok3Vcm+ZJdx+a5gK3rBX60GPt7gyzMLQh60SImiUCgYEAxOd6
KyeUYPQjkXT20YUFJfV1CySdBMs/An6uPN42+Bi/WUg3X9x6PpY11ehz+J811fzS
VCjmZ9VBHWoXDKsN/elhZ69KTfp7s6bBn6wc7AmdlnqrF7s0bbw3IKyYJtK3NLM7
cRbnHe3yZlp+PgEoUPDDT6FPlQ/JmZQI59Ik+T8CgYEAiM93b3lc80Uj80+riEU3
c5wArOw5FgNl9yn0xjUNYalQPcxTqxuRNVAwhhAyoT9mz9R/Io/XPr+cI9Un+is+
LrktOGS7odqijMzBhOeGOuByZk5qVVlzkN0IJ1PiEAV118ndBlASPbbC/AUYHUun
+9ckA3o+2+4UkiDlfYj+9VUCgYEAuvo4l6wxCVQsRl70Vgdj2STZ7SfqdvftsJfN
Kv204yjU45phAwWhi7cmDid7oNbGz5oRvFtOV8E44Q6yLpRsZ/XrSgM5owy91N4A
NXjByh5jZ9a6i4F4is/U5ZEftpYX5NJiGsSt2UzwBuPdx1FgEGRgg0hiAuGIBe99
+W0jMQ8CgYBDrwU1lToYH6RhaTxBGZC3OYKnUXpWEsUtYHCITYABbuBgtx4VAxJV
+tBd7gMg+pTIE1WEJ5nJLrR2c624H6ntoMHG0s04F8OWkff6whhCBLYg5FDvxFvG
kCGiW/GUj3TYp6GRMHoHtepPyToJuzIwV8fSANEZ4WcdlK/yKX3Zrw==
-----END RSA PRIVATE KEY-----
```

gtta-ssh.ppk

User's private key file for connecting through SSH – should be used with PuTTY.

```
PuTTY-User-Key-File-2: ssh-rsa
Encryption: none
Comment: imported-openssh-key
Public-Lines: 6
AAAAB3NzaC1yc2EAAAADAQABAAABAQCbVY8l9HX7TreSTi9jxQxzm9vt0VcDUfWl
NE/4XmRXfFbc/rEP7Ip9wCD7AM2pkSogs5YS5sgNOvCJcXOTtkc52hzNXxu+y+Ws
XptEywphrKtmok4R1w4WYAgctEwVnvprDBNuF4tsmOYgm+D77Up8iTbHji7XnjBH
6FvsX0fZhVyZ4Sxl9SL5lqXWtpEfGh1vWu7aS3+zFIjeCU4tEaqF/yIYypcC3VpG
0WmL+VINx8S/krkEys9IBkJBx0EfmhGqORlzEF2uIyqxDaVH/2Y/7rLfxRDyN+c0
nopmtUnJB2yOufV07K0dlx3/UYB09tq1teidnXtyNUsYH5nCv+wb
Private-Lines: 14
AAABACWkpF4kUfsm5mG0RNO+yvexS6jkVFvfntH8TWz5IwP4g+xmZG5hemZjCxsI
5M40+aqXGsVV3CEoqWYFcmbXg4dHjjdO1yBztSMCgko3kjp9Z8QljRnRrf5KI20h
XFbZAgKzGHpThlw46Xv5ippCtQxdDENr93oVQcoLS0uLA5R41oFEqZqvriGR5rmg
K286Hi+dE6ihaANxXT03nq0EfHY5mJ3RjmXcbrDCQk7nhWxlPL/kP+lQ0389vrI7
Yv0UYtKG3SCjcr49hjc6sFXrNGx6AdW4VYMTjcppzCDU4aCEbXPj+0/Gsb6TOJ2Q
PQbC7dIbBie3Ci1r2vuKbCMDBzEAAACBAMn0LkjarZl6cJexnqfJtEuOekJljbdW
c6wdD6ILlm0B5YFSIsRDlMcULMIjmq95z3TBQKORggBZ1I34YESRDjC4Zr0nFsMs
o10LYOMCDbPkAcTPMXR4Jh244te2SyHoc0LYaJN1XJvmSXcfmuYCt6wV+tBj7e4M
szC0IetEiJolAAAAgQDE53orJ5Rg9CORdPbRhQUl9XULJJ0Eyz8Cfq483jb4GL9Z
SDdf3Ho+ljXV6HP4nzXV/NJUKOZn1UEdahcMqw396WFnr0pN+nuzpsGfrBzsCZ2W
eqsXuzRtvDcgrJgm0rc0sztxFucd7fJmWn4+AShQ8MNPoU+VD8mZlAjn0iT5PwAA
AIBDrwU1lToYH6RhaTxBGZC3OYKnUXpWEsUtYHCITYABbuBgtx4VAxJV+tBd7gMg
+pTIE1WEJ5nJLrR2c624H6ntoMHG0s04F8OWkff6whhCBLYg5FDvxFvGkCGiW/GU
j3TYp6GRMHoHtepPyToJuzIwV8fSANEZ4WcdlK/yKX3Zrw==
Private-MAC: c60624fcd9fa3f42059d768c074572d3a8ee2ec7
```