TS hosting instructions

Internal setup instructions

An installation includes:

- Server installation
- Domain name
- SSL certificate
- Server monitoring
- Remote backup

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Scaleway server setup

Installing the server

1. Log into the Scaleway account
2. Navigate to *Instances*
3. Click the "+ Create Instance" button
4. Choose an appropriate zone
5. Choose an appropriate server size
6. Choose a supported OS (CentOS Stream 9)
7. Give the server a useful name
8. Add tags
    1. Common ones:
        1. customer-facing
        2. partner
        3. internal
        4. ts-cloud
        5. ts-infrastructure
9. Optional: Add a data-volume
10. Reserve a dedicated (public) IPv4 address
11. Remove IPv6 option
12. Click *Create*
13. SSH into the server and install the CLI

AWS Server setup

Installing the server

1. Log into the AWS account
2. Choose an appropriate zone, eg. eu-north-a (Stockholm)
3. Navigate to the EC2-dashboard
4. Launch a new instance
    1. Give it a useful name
    2. Change the *Instance type*
    3. Select a keypair that you have access to
    4. Select "Select existing security group", select:
        1. WebAccess
        2. default
        3. DefaultSSHAccess
    5. Optional: Adjust storage
    6. Launch the isntance
5. Reserve a dedicated (elastic) IP address
    1. Click *Allocate elastic IP address*
    2. Click *Allocate*
6. Associate the elastic IP
    1. Find the IP in the list, click it
    2. Under *Actions* choose *Associate elastic IP address*
    3. Find the instance you just launched
7. SSH into the server and install the CLI
    1. Optionally run: `ts developer-access`

Set up domain name

1. Sign in to the Cloudflare Dashboard
2. Select the domain, usually tsnocode.com
3. Select DNS in the side menu
4. Click *Add Record*
    1. Type: A
    2. Name: the subdomain part, eg. *alpha*, if the full domain is *alpha.tsnocode.com*
    3. IPv4 address: IP of the server
    4. Disable Proxy
    5. Add a comment (customer and hosting provider)
5. Click *Save*

Set up SSL/TLS/HTTPS

1. SSH into the new server
2. Ensure that the server has been fully installed, and an instance has been installed as well
    1. To install run: ts install
3. Solution 1, SSL offload using nginx
    1. Install nginx, run: ts install-proxy
    2. Setup a proxy, run: ts setup-proxy
4. Solution 2, SSL connector in Tomcat
    1. Run: ts install-routing
5. Install certbot, run: ts install-ssl
6. When the install finishes, select Y, or run: ts setup-ssl
7. Follow the prompts

Old implementation

The following is the old, manual, way of installing SSL certs.

Tomcat 7 automatic installation

Using the TS commandline tools, you specify the domain and your email

```
tsinstallssl.sh server.acme.com sslresponsible@acme.com
```

After a couple of minutes you will be rquired to enter the domain an email again, and accept the terms of service

Tomcat 7 manual installation

Install and configure letsencrypt

Download an build certbot (letsencrypt client)

```
sudo yum -y install python27-devel git (deprecated)
```

```
sudo yum -y install python36 python36-pip
sudo yum -y install git-all
sudo git clone https://github.com/letsencrypt/letsencrypt /opt/letsencrypt
/opt/letsencrypt/letsencrypt-auto --debug --agree-tos
```

Create a config file

```
sudo touch /etc/letsencrypt/config.ini
sudo chmod 777 /etc/letsencrypt/config.ini
sudo echo "rsa-key-size = 4096" >> /etc/letsencrypt/config.ini
sudo echo "email = kpe@tempusserva.dk" >> /etc/letsencrypt/config.ini
```

Generate PKCS12 certificate

Generate a certificate

```
sudo mkdir /usr/share/tomcat7/webapps/ROOT
/opt/letsencrypt/letsencrypt-auto certonly --debug --webroot -w /usr/share/tomcat7/webapps/ROOT -d
letsencrypt.tempusserva.dk --config /etc/letsencrypt/config.ini --agree-tos
```

Convert to pkcs12 format

```
 sudo -s
```

```
cd /etc/letsencrypt/live/letsencrypt.tempusserva.dk
openssl pkcs12 -export -out bundle.pfx -inkey privkey.pem -in cert.pem -certfile chain.pem -password
pass:TempusServaSecret
chmod 755 bundle.pfx
chmod 755 /etc/letsencrypt/live
```

```
 Press: ctrl + d
```

Install certificate in Tomcat

Edit Tomcat configuration

```
sudo nano  /usr/share/tomcat7/conf/server.xml
```

```
        <Connector
        protocol="org.apache.coyote.http11.Http11NioProtocol"
        port="8443" maxThreads="200"
        scheme="https" secure="true" SSLEnabled="true"
        keystoreFile="/etc/letsencrypt/live/letsencrypt.tempusserva.dk/bundle.pfx"
keystorePass="TempusServaSecret"

ciphers="TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA256,TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA,TLS_RSA_WI
TH_AES_128_CBC_SHA256,TLS_RSA_WITH_AES_128_CBC_SHA"
        clientAuth="false" sslProtocol="TLS" keystoreType="PKCS12"/>
```

Reboot the server

```
service tomcat7 restart
```

Automated renewals

Before starting test that the renewal process works

```
/opt/letsencrypt/letsencrypt-auto renew --dry-run
```

Make sure the path is accessible from cron

```
sudo chmod go+x /etc/letsencrypt/archive
sudo chmod go+x /etc/letsencrypt/live
```

Make a script file

```
sudo nano /usr/bin/tsrefreshcerts.sh
```

.... containing the following commands

```
/opt/letsencrypt/letsencrypt-auto renew
cd /etc/letsencrypt/live/letsencrypt.tempusserva.dk
openssl pkcs12 -export -out bundle.pfx -inkey privkey.pem -in cert.pem -certfile chain.pem -password
pass:TempusServaSecret
/usr/bin/tstomcatrestart.sh
```

Now add a job to the crontab

```
sudo crontab -l > tempcron
echo "0 0 1 * * /usr/bin/tsrefreshcerts.sh" >> tempcron
sudo crontab tempcron
rm tempcron
```

Problems with Amazon Linux?

In case the autorenewal process fails try updating the dependencies and pip

```
sudo /opt/eff.org/certbot/venv/bin/pip2 install cryptography zope interface
sudo /opt/eff.org/certbot/venv/bin/pip2 install --upgrade pip
```

```
sudo rsync -avz /opt/eff.org/certbot/venv/lib64/python2.7/dist-packages/
/opt/eff.org/certbot/venv/lib/python2.7/dist-packages/
```

Still got problems with Amazon Linux?

In case certbot cant find the root folder try and run it manually

```
sudo /opt/letsencrypt/letsencrypt-auto certonly
```

Choose the following values when prompted

```
2: Place files in webroot directory (webroot)
<domain>
2: Renew & replace the cert (may be subject to CA rate limits)
/usr/share/tomcat7/webapps/ROOT/
```

Need manual crontab install?

Steps

- sudo crontab -e
- press INSERT
- move to bottom of file
- paste this

```
0 0 1 * * /usr/bin/tsrefreshcerts.sh
```

- press ESC
- press :wq

External Certificate

Acquire certificate

Buy a certificate from a provider. Note that the max lifetime is currently 1 year, så buying a 5 year certificate only help on pricing.

```
https://www.ssls.com/
```

After issuing the files you will have

- A private key - ex: movia.tempusserva.dk.pfx
- A certificate - ex: movia_tempusserva_dk_key.txt

Install certificate

1. Upload the files

2. Convert to a pfx file format

```
openssl pkcs12 -export -out movia.tempusserva.dk.pfx -inkey movia_tempusserva_dk_key.txt -in
movia.tempusserva.dk.crt
```

Write the password down

Check alias if needed

```
openssl pkcs12 -nokeys -info -in movia.tempusserva.dk.pfx -passin pass:TempusServaFTW!
```

4. Install in tomcat Add the following code to <tomcat>\conf\server.xml

```
<Connector port="8443" protocol="HTTP/1.1" SSLEnabled="true" URIEncoding="UTF-8"
  scheme="https" secure="true" maxHttpHeaderSize="8192"
  maxThreads="150" minSpareThreads="25" maxSpareThreads="75"
  enableLookups="false" acceptCount="100" disableUploadTimeout="true"
  keystoreFile="/mnt/sda/certs/movia.tempusserva.dk.pfx" keystorePass="TempusServaFTW!"
```

```
keystoreType="PKCS12"
  clientAuth="false" sslProtocol="TLS" sslEnabledProtocols="TLSv1.2"
  ciphers="TLS_ECDHE_RSA_WITH_3DES_EDE_CBC_SHA,
          TLS_RSA_WITH_AES_128_CBC_SHA,
          TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA,
          TLS_RSA_WITH_AES_128_CBC_SHA256,
          TLS_RSA_WITH_AES_128_GCM_SHA256,
          TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA256,
          TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256,
          TLS_RSA_WITH_AES_256_CBC_SHA,
          TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA,
          TLS_RSA_WITH_AES_256_CBC_SHA256,
          TLS_RSA_WITH_AES_256_GCM_SHA384,
          TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA384,
          TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384"
  compression="on" compressionMinSize="2048" nocompressionUserAgents="gozilla, traviata"
     compressableMimeType="text/html,text/xml,text/plain,application/xml"
/>
```

5. Restart the server

Problems with wrappers

The usage of wrappers can result in SSL warnings.

If your solution is depending on the use of Wrappers, please tjeck the following

- All style, script and image references are made with HTTPS
- No referenced stylesheets depends on images using HTTP

If the wrapper cannot be transformed from HTTP to HTTPS, referenced ressources should be copied to the server

- Stylesheets copied to TS stylesheet
- Images downloaded and copied to the media library

After changes are made remmeber to flush caches: Both Chrome and IE sometimes caches longer than expected.

Set up remote backup

Client server setup

1. Log into server via SSH
2. Ensure that the backup ssh-certificate is installed
    1. On old servers running Legacy CLI
        1. Run: tsrefreshscripts.sh
        2. Run: tsbackupcertificates.sh
        3. Check if cronjobs are missing: sudo crontab -l
            1. Run: tsinstallcronjobs.sh
    2. On newer servers running Current CLI
        1. Run: ts update-script
        2. Run: ts backup-database-rsync
3. Ensure that port 22 is open for TCP trafic from the backup server IP
4. Run the license report service manually, if it has never been executed

Backup server setup

1. Ensure that the server is present in the server-list on the support-server
2. Check the *Backup* option
3. Set a unique name for the backup
    1. Only lowercase and a-z
4. Save

Validate backup

1. Wait to 24h passes
2. Check the server-record on the support-server
    1. Ensure that a backup size is recorded and last-backup is within the last 24 hours

Set up monitoring

1. Log in to UptimeKuma
2. Clone an existing monitor group in the *Customers* group
3. Clone an existing not "**-** *Healthy*" monitor
    1. Change *Friendly Name*
    2. Change *URL*
    3. Change *Monitor Group*
4. Clone an existing "**-** *Healthy*" monitor, if hosting is not shared
    1. Change *Friendly Name*
    2. Change *URL*
    3. Change *Monitor Group*
5. Tjeck the monitor is working

Basic setup

All the following canges are carried out in the Tempus Serva designer

Company logo

1. Upload you logo file via Ressources > Media files
   - Show the logo after upload
   - Copy the URL of image
2. Add to stylesheet via Ressources > Stylesheet

```
.logo {
  background: url(https://alpha.tempusserva.dk/TempusServa/media/logo.1.svg) no-repeat !important;
}
```

Company colors

Edit the stylesheet via Ressources > Stylesheet

- themePrimary
- themeSecondary
- themeTeritary (optionally)

Next edit the graph colors in Modules > Configurations

- diagramColor
- diagramColorTextAxis (optionally)

Setting up outbound emails

In the designer edit the following Modules > Configurations

- smtpServer
- smtpUsername
- smtpPassword
- smtpTestEmail

Cloning an instance

Connecting to the server

First you must access the commandline on the system in question. This is done using a certificate and the Putty program.

1. Get a certificate private key from an existing admin user
2. Install Putty on your machine (alternative WinSCP)
3. Set up the profile in Putty
    1. Set hostaname = {server IP or domain name}
    2. Set Category > Connection > Data > Auto login username = ec2-user
    3. Set Category > Connection > SSH > Auth > Credentials > Private key file authentication = {private file location}
4. Session > Save

Test you can connect to the server.

Note: Connection will fail if you try connecting from an IP that is not whitelisted by the TS server team

Cloning the system

Copy an instance

1. Run: ts clone-app
2. Define source name
3. Define name of new instance

Validate after 2 mins that the instance is running

Option: Change configurations

Some server settings are more appropriate for demo/test systems.

Consider setting

1. Backend > Modules > Configuration
    - smtpTestMode = false
    - serviceAutostart = false

EC2 server recovery

Recovery procedure without database backup

Changes in AWS

1. Make a snapshot of the running server
2. Make a volume from the snap shot
3. Name the volume: RESTORE COPY
4. Create a NEW server
5. Attatch the RESTORE COPY to NEW server on /dev/sdf

Connect to new server

1. Install TS client tools
2. ts quick-install
3. ts stop-webserver
4. ts stop-database
5. mkdir /mnt/oldroot
6. sudo mount /dev/nvme1n1p1 /mnt/oldroot
7. sudo rm -r /var/lib/mysql
8. sudo cp -r /mnt/oldroot/var/lib/mysql /var/lib
9. ts start-database
10. mysql -uroot -p -e "UPDATE applive.systempolicy SET PolicyValue='false' WHERE PolicyName LIKE 'securitySsl%'"
11. sudo rm -r /mnt/sda/*
12. sudo cp -r /mnt/oldroot/usr/tempusserva/sda/* /mnt/sda/
13. sudo chmod 777 -R /mnt/sda/files
14. sudo cp /mnt/oldroot/usr/share/tomcat8/conf/Catalina/localhost/* /usr/share/tomcat8/conf/Catalina/localhost
15. ts start-webserver
16. Ensure server is running

Changes in AWS

1. Stop NEW server
2. Detatch RESTORE COPY
3. Stop OLD server

4. Deassociate IP from OLD server
5. Associate IP to NEW server
6. Start NEW server

Connect to new server

1. ts install-ssl
2. mysql -uroot -p -e "UPDATE applive.systempolicy SET PolicyValue='true' WHERE PolicyName LIKE 'securitySsl%'"
3. ts restart-webserver

Steps is using S3 filesystem

1. Server_maintenence#Moving_files_to_S3_storage
   - Step: Add IAM role to server
   - Step: Install the mountpoint

Local development environment tutorial

This tutorial's goal is to explain how to set up the TS-nocode platform and database on a Windows PC.

You will need

- TortoiseSVN
- Apache Tomcat 8.5 or 9
- Netbeans 8.2 running JDK 1.8 or newest Netbeans and a supported JDK
- MariaDB 11
- Navicat for MariaDB
- npm (NPM Package Manager)
- TempusServa.war
- mariadb-java-client-3.1.4

What to do

- Create a working copy of the codebase via TortoiseSVN (see https://tortoisesvn.net/docs/release/TortoiseSVN_en/tsvn-quick-start.html)
- Start MariaDB in Windows Services
- Create a new connection in Navicat with the following parameters: host: localhost, port:3306, username:root. Connection name doesn't matter.
- Create three new databases in Navicat; tsbase, tslive, and tstest. Configuration should be left as default.
- Start Apache Tomcat in Windows Services.
- Put TempusServa.war in Tomcat 8.5/webapps. A folder with the name TempusServa should be generated automatically after a couple of seconds.
- In TempusServa/sql are some sql files which have to be run on each of the tree databases in navicat in the following order:

1. ts_base_restore -> appbase
2. ts_live_create -> applive
3. ts_test_create -> apptest

- If the sql files fail to run properly you may have to add the following to my.ini in MariaDB 11.0/Data:

```
max_allowed_packet = 1G

innodb-default-row-format = dynamic

innodb-lock-wait-timeout = 1200

innodb_log_file_size = 2G

innodb_log_buffer_size = 1G

innodb_strict_mode = 0
```

  (Restart MariaDB in Windows Services to activate the new settings)

- Create a new file TempusServa.xml in Tomcat 8.5\conf\Catalina\localhost
- Both context.xml in your working copy in sfwServlets\web\META-INF and TempusServa.xml should look like this:

```
<?xml version="1.0" encoding="UTF-8"?>
<Context antiJARLocking="true" path="">
      <Resource name="jdbc/TempusServaLive" auth="Container" type="javax.sql.DataSource"
         maxActive="80" maxIdle="30" maxWait="2000"
         removeAbandoned="true" removeAbandonedTimeout="60" logAbandoned="true"
         validationQuery="SELECT 1" validationInterval="30000" testOnBorrow="true"
         username="root" password="*yourPassword*" driverClassName="org.mariadb.jdbc.Driver"

url="jdbc:mariadb://localhost:3306/tslive?autoReconnect=true&amp;useUnicode=true&amp;characte
rEncoding=UTF-8"
      />
      <Resource name="jdbc/TempusServaTest" auth="Container" type="javax.sql.DataSource"
         maxActive="5" maxIdle="3" maxWait="10000"
         logAbandoned="true"
         validationQuery="SELECT 1" validationInterval="30000" testOnBorrow="true"
         username="root" password="*yourPassword*" driverClassName="org.mariadb.jdbc.Driver"

url="jdbc:mariadb://localhost:3306/tstest?autoReconnect=true&amp;useUnicode=true&amp;characte
rEncoding=UTF-8"
      />
 </Context>
```

  Remember to add your own root password to the xml's.

- Insert mariadb-java-client-3.1.4 in Tomcat 8.5\lib.
- In Netbeans, open the following projects and build them afterwards: p2eShared, p2eSolution, p2eTemplate, sfwServlets.
- In Netbeans Projects view, run debug file on sfwServlets\Source Packages\dk.p2e.blanket\live.java.
- login/password is admin/TempusServa1234.
- Login might not work due to being redirected to a https connection if securotyssllogin and -pages in the systempolicy table in tslive are not set to false.
- If views are missing, go to the backend and then Modules -> Admin services -> Cache control -> Reload policies. Then Rebuild artifacts -> Rebuild views. This should create the missing views in the database.

Accessing the backend

If you start the server from Netbeans, you will not have access to the backend. To do this you will need to start the server by running Tomcat in Windows Services. A good idea is to have both servers running at the same time on two different ports.

- To change the used port in Tomcat go to Apache Software Foundation\Tomcat 8.5\conf\Server.xml.
- Set the port to for example 8081 at the following spots in the xml file:

```
<Connector port="8081" protocol="HTTP/1.1"
           connectionTimeout="20000"
           redirectPort="8443"
           maxParameterCount="1000"
           />
```

  (Tomcat will have to be restarted for the changes to take effect)

- To access the server from Tomcat go to http://localhost:8081/TempusServa

Satellite servers

Setting up a satellite server

The following guide explains how a master / satelite server is set up.

It is assumed that you allready have the MASTER server running.

basic installation Linux

First do a normal TS installationon the SATELITE server

Add access to the MySQL database on the SATELITE server

```
iptables -A INPUT -i eth0 -p tcp -m tcp --dport 3306 -j ACCEPT
sudo /etc/init.d/networking restart
```

Test access from the MASTER server

```
telnet sateliteServer 3306
```

Synchronizing master and satellite

Initially the servers should look alike so it is much easier to stream all data across

On the SATELITE server dump configutations to a file

```
mysqldump -uLocalUser -pLocalPW --tables tslive.systempolicy > policy.sql
```

On the MASTER server stream all data

```
mysql -uLocalUser -pLocalPW > mysql -uRemoteUser -pRemotePW
```

On the SATELITE server reload configutations

```
mysql -uLocalUser -pLocalPW --tables tslive.systempolicy < policy.sql
```

Changes to master server

Changes to slave server

Testing the setup

Migrating an instance

How to migrate a running instance to a new server, with a message on the old server about the migration.

1. Set up a new server (Scaleway hosting)
2. Install the newest alpha release on the new server
3. On the old server, if a notice about migration is wanted/needed
    1. Turn off tomcat
    2. Move the webapps folder and war-file out of the webapps folder
    3. Create a folder with content about the server meing migrated
    4. Start tomcat
4. On the old server
    1. Move to the ROOT webapp `cd /usr/share/tomcat/webapps/ROOT`
    2. Export the database `sudo mysqldump -p [LIVE-DB-NAME] > tslive.sql`
5. On the new server
    1. Download the sql file on the new server, to a folder with enough space
        1. `cd /mnt/sda`
        2. `wget [OLD-SERVER]/tslive.sql`
    2. Fix naming in sql file, if the webapp changes name
        1. `sed -i 's/tslive/applive/g' tslive.sql`
        2. `sed -i 's/tsbase/appbase/g' tslive.sql`
        3. `sed -i 's/tstempusserva/tsapp/g' tslive.sql`
    3. Turn off tomcat
    4. Import the sql file `mysql -p applive < tslive.sql`
6. Connect to the new database
    1. Move sql functions if needed
    2. Fix policies
        1. applicationName
        2. applicationBasePath
        3. applicationServer
        4. Maybe:
            1. applicationIsBehindAReverseProxy
            2. applicationlPort
            3. applicationlPortSSL
            4. smtpTestMode
            5. securitySslPages
7. If an update of the webapp version is not desired:
    1. On the old server
        1. Move the webapps war-file to the ROOT webapp folder
    2. On the new server
        1. Download the war-file `wget [OLD-SERVER]/TempusServa.war`

    2. Replace the war-file in the webapps folder `mv TempusServa.war /usr/share/tomcat9/webapps/app.war`
8. Start tomcat on the new server
9. Test the new server
10. Update DNS
11. If the domain is still the primary domain
    1. Setup SSL
12. If the domain is no longer the primary domain
    1. Update SSL cert with old domain
    2. Expand nginx setup to include old domain
13. If the webapp changed name
    1. Add a redirect app `ts install-redirectapp`
14. If the domain changed
    1. Add a link to the new domain in the "migration webapp" on the old server

Sample migration webapp

index.jsp

Just a basic page telling the user that the server is unavailable.

```
<html>
  <head>
    <title>Sorry, we are migrating the server</title>
  </head>
  <body>
    <h1>Sorry, the server is currently unavailable</h1>
    <p>The server is currently being migrated, please check back later</p>
  </body>
</html>
```

WEB-INF/web.xml

Remaps all requests to the server, to the index.jsp file.

```
<?xml version="1.0" encoding="UTF-8"?>
<web-app version="2.4" xmlns="http://java.sun.com/xml/ns/j2ee"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://java.sun.com/xml/ns/j2ee http://java.sun.com/xml/ns/j2ee/web-app_2_4.xsd">
```

```
    <display-name>Redirect TempusServa</display-name>
    <servlet>
        <servlet-name>index</servlet-name>
        <jsp-file>/index.jsp</jsp-file>
    </servlet>
    <servlet-mapping>
        <servlet-name>index</servlet-name>
        <url-pattern>/*</url-pattern>
    </servlet-mapping>
</web-app>
```

Remote debugging in Netbeans

How to enable debuggning in netbeans on a remote server, to enable break points.

The server

Enable remote debugging in Tomcat.
Edit the service file

```
sudo nano /etc/systemd/system/tomcat[VERSION].service
```

Copy the "CATALINA_OPTS" line and comment the old one out

Add the following add the end of the line (before the ending ping)

```
 -XX:+UseParallelGC -Xdebug -Xrunjdwp:transport=dt_socket,address=*:9999,server=y,suspend=n
```

Save and exit nano

Reload the service

```
sudo systemctl daemon-reload
```

Restart tomcat

```
ts restart-webserver
```

Ensure that a process now is listening on port 9999

```
ss -lntu
```

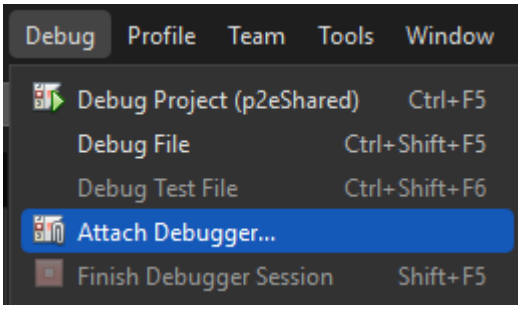
Open port 9999 in the firewall using the IaaS providers interface

Netbeans

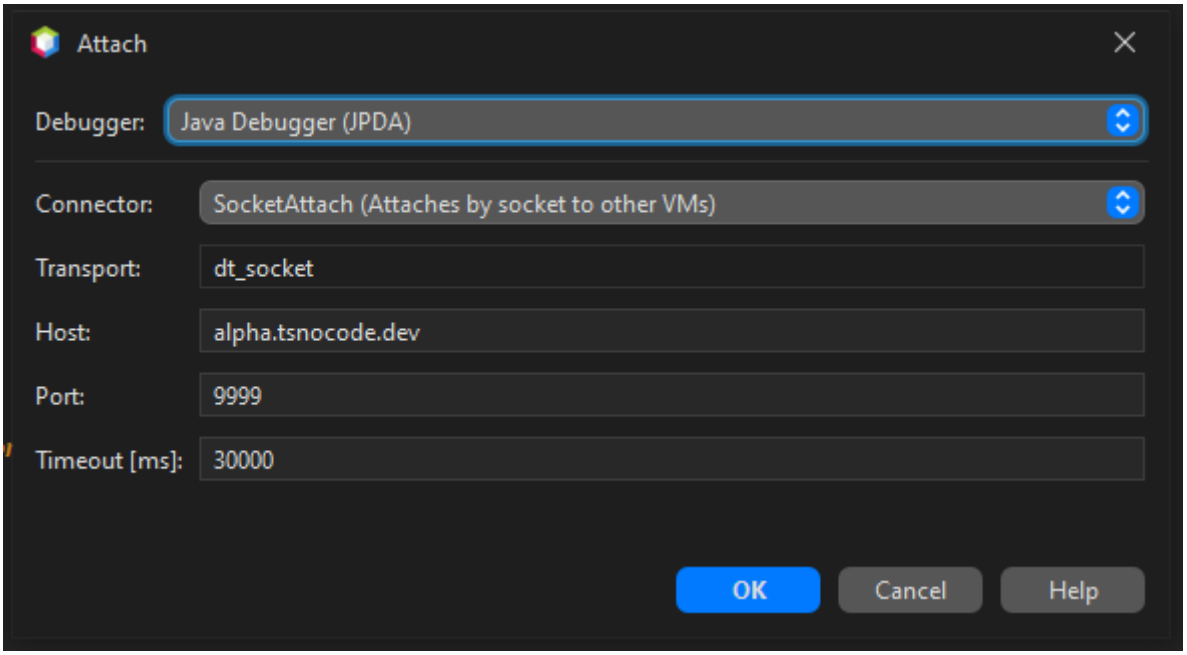
Ensure that you are running the same version of the software as the server, otherwise the break points wont make sense.

Attatch to the remote server

Select "Debug" and "Attach Debugger..."



Input the host and port 9999



Click OK

Find the "Debugger Console", normally in the bottom of the window, in the "Output" tab.

The console should read "User program running"

Try adding a break point and see if it works

Change login session duration

To increase the number of minutes a session lasts do the following.

Warning!
This change affects all instances on a server!

First, update the tomcat configuraion

```
sudo nano /usr/share/tomcat/conf/web.xml
```

Second, find the following config and adjust acordingly
The attribute is defined in minutes.

```
<session-config>
  <session-timeout>30</session-timeout>
</session-config>
```

Third, restart tomcat

```
ts restart-webserver
```

Fourth, update the policies on the instance.
Update `sessionLifetimeMinutes` and `sessionLifetimeMaximum`.

Disable ssh password login

Add a sshd config file with the following content

```
sudo nano /etc/ssh/sshd_config.d/99-ts.conf
```

```
ChallengeResponseAuthentication no
PasswordAuthentication no
UsePAM no
```

Reload the SSH daemon

```
sudo systemctl reload sshd
```

WARNING!
Now you are no longer able to create new session to that server!
Remember to add your ssh certificate before closing the session!

Proxies and policies

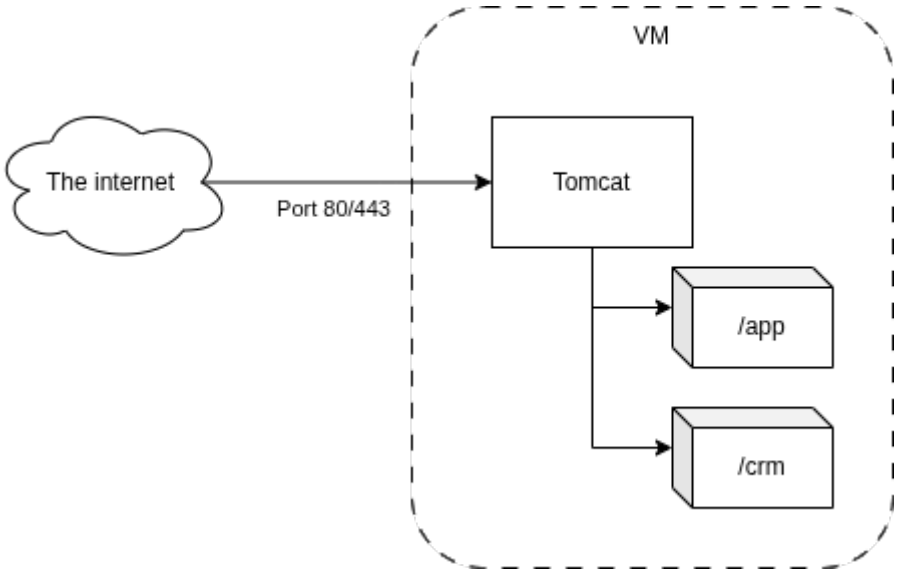
This page tries to show how to configure a couple of central policies, based on how TS is hosted.

Tomcat on port 80/443

When running tomcat directly on port 80/443, the following policies should be set.

Policy	Value
applicationIsBehindAReverseProxy	false
applicationIsHiddenBehindAReverseProxy	false
applicationIPort	80
applicationIPortSSL	443
securitySslPages	Depends on if SSL is enabled (recommended)
applicationServer	A domain pointing at the server

This was the default setup up untill 2025-Q2.
This illustration shows how the traffic is routed.

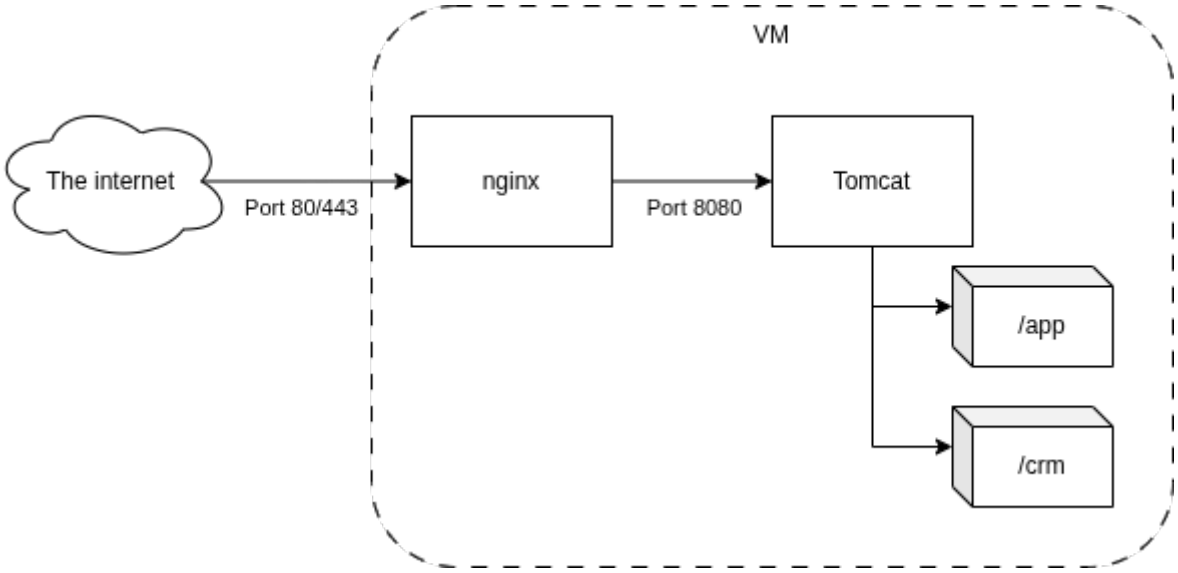


Behind a proxy (nginx)

When running tomcat behind a reverse proxy (eg. nginx), the following policies should be set.

Policy	Value
applicationIsBehindAReverseProxy	true
applicationIsHiddenBehindAReverseProxy	false
applicationIPort	80
applicationIPortSSL	443
securitySslPages	Depends on if SSL is enabled (recommended)
applicationServer	A domain pointing at the server

This is the default setup as of 2025-Q2.
It helps when running SSL/TLS and multiple/changing domains.
This illustration shows how the traffic is routed.



Hidden behind a proxy

When hiding the webapps hosted by tomcat behind a reverse proxy (eg. nginx), the following policies should be set.

Policy	Value
applicationIsBehindAReverseProxy	true
applicationIsHiddenBehindAReverseProxy	true
applicationIPort	80
applicationIPortSSL	443
securitySslPages	Depends on if SSL is enabled (recommended)
applicationServer	The domain pointing at the instance

This setup also requires that the context file for the given webapp is modified.
The following attributes have to be added to the `Context` opening tag.

```
useRelativeRedirects="false" sessionCookiePath="/"
```

All of this is handled by the `ts` script.

This is used for shared hosting, where multiple domains are pointing to the same server, as to not expose other installations/customers.
This illustration shows how the traffic is routed.