There are two types of Cloning, server clone and only DB clone.

Teamcenter data base cloning process: -
- Stop production corporate, web tier load balancer server & FSC.
- Copy the production database and store in the shared location.
- Restart production corporate, web tier load balancer server.
- Stop production corporate, web tier load balancer server & FSC for staging.
- Perform database import and configuration.
- Perform volume copy and configuration.
- Stop MSSQL server.
- Restart MSSQL server.

Export or copy of the existing source database.
- Login to SQL database server
- RMB on database > task > back up > Verify database name > backup type: full > click on ok
- Place this database dump file somewhere (shared location) so that it can be accessed from your new (target system) database server.
- Restart all servers in source system. Pool Manger, web tier, load balancer

Import Source Database to Target System
- Stop all target system pool manager, FSC servers and web tier servers.
- RMB on database > Rename the existing database in target system. (XXXX to XXXX_OLD)
- Select the database folder and Click "Restore Database…"
- Click on select from device > Click browse button> open .bak file
- Select the restore checkbox and select the source system database.
- Add the target database user to imported database. (So that target database
- user has access to imported database)
- Select the renamed database > Security > RMB on User > Add new user
- Add schema and database role to perform the activities

Target System TC_DATA Configuration
- Backup of tcdata, tcroot, preference & backup.xml
- Preferences_manager -u=infodba -p=aWm32sJcbc7trL -g=dba -mode=EXPORT -scope=SITE -out_file=G:\Backup\PREFS_SITE_PLM18_ALL_24MAY.xml
- Modify the password. (This the database password)
  set PAS=aWm32sJcbc7trL
  install -encryptpwf -e=PAS -f=F:\App\ACTC\EPIROC_CUSTOM\security\AC4_PLM_infodba_encrypted.pwf

```
set PAS=aWm32sJcbc7trL
install -encryptpwf -e=PAS -f=F:\App\ACTC\EPIROC_CUSTOM\security\AC4_PLM_infodba_encrypted.pwf
```

- Update the indaba password into profilevar.bat from %TC_DATA% > set TC_DB_CONNECT

```
set TC_DB_CONNECT=tmgsvcplm18:eTxJee00JBhdjCFde5XG+tyyREfR1brb8D0wVfH1F88@DATABASE=tcdevplm18;SERVER=TMGSSETPLM18.epiroc.group,50001
```

Update the volume and host name in the imported database.
- After import the source database into target system we need to change the site id (from new to old site id) to avoid changes in the FMS master file.
- Check Volume host name, ID & Path
  - select * from PIMANVOLUME;
  - update PIMANVOLUME set pnode_name='TMGSSETPLM18'
  - update PIMANVOLUME set pwnt_path_name='F:\Data\Volume\Volume01' where pvolume_name='Volume01'

- Check site and update (You can change site ID like 2024 27 05 18)
  - select * from PPOM_IMC
  - update PPOM_IMC set psite_id='-2024150918' where psite_id='-1696941070';
  - update PPOM_IMC set phttp_site_node='http://TMGSSETPLM18.epiroc.group:9090/tc' where phttp_site_node='http://TMGSSETPLM17.epiroc.group:9090/tc';
  - update PPOM_IMC set pname='DEV-TC13-PLM18' where pname='DEV-TC13-PLM17';

- Check POM_ROOT , POM_BOOT, POM_INDEXES and update
  - select * from POM_BOOT

Update POM_BOOT set site='-2024150918' where site='-1696941070';

- o select * from POM_ROOT
  Update POM_ROOT set site_id ='-2024150918' where site_id='-1696941070';

- o update POM_ROOT set
  path='C:\PLM\ACTC\TC_DATA\pom_schema_TMGLSEGJ7GYY1_ACTC_LCOAL_DB'
  where site_id='-1696941070';

- o select * from POM_INDEXES
  Update POM_INDEXES set site='-1696941070' where site='-2063243209';

- Restart the MS SQL Server and FMS services.

Target System Teamcenter Basic Testcases
- Regen Schema and POM transmit files
  - o install -regen_schema_file infodba infodba dba
- Regenerate the xmit file
  - o install -gen_xmit_file infodba infodba dba
- Base test for after reconfigure the imported database
  - o install -ayt
- Clear the locks for existing session
  - o Clearlocks -verbose

Target System Teamcenter Preference Changes
- preferences_manager -u=infodba -p=infodba -g=dba -mode=export -scope=SITE
  -out_file=site_pref.xml
- Edit following values.
  - o Default_Transient_Server
  - o Default_Transient_Volume_Id
  - o Fms_BootStrap_Urls
  - o Transient_Volume_Installation_Location
  - o Transient_Volume_RootDir
  - o WEB_default_site_server
  - o appbar_title_contents – Put empty value
  - o WEB_help_server – Put empty value

- preferences_manager -u=infodba -p=infodba -g=dba -mode=import -scope=SITE -f
  ile=site_pref.xml -action=OVERRIDE
- Run backup_xmlinfo: Run Backup_xmlinfo utility and verify the configuration.
  - o backup_xmlinfo.exe -u=infodba -p=infodba -g=dba
- Check transient volume and site ID with FMS master home.
- Update the site ID and Volume ID into FMS master
- Regenerate the schema file after update the preference values.
  - o install -regen_schema_file infodba infodba dba

- Regenerate the xmit file after update the preference file.
  - o install -gen_xmit_file infodba infodba dba
- Restart the FMS (Through TEM or service both are fine)
- Run backup_xmlinfo: Run Backup_xmlinfo utility and compare with old one
  - o backup_xmlinfo.exe -u=infodba -p=infodba -g=dba

Target System Teamcenter Testing Functionalities
- o Stop the pool manager and FSC service and clean the Teamcenter cache folders.
- o Delete the "Siemens" and "Teamcenter" folders from %USERPROFILE% folder.
- o Delete the %TEMP% folder.
- o Start the FSC service.
- o Update all users and groups with Inactive status.
- o Update staging users and groups with active status.
- o Start Teamcenter 2-Tier and verify that are you able to login. (Check syslog file if
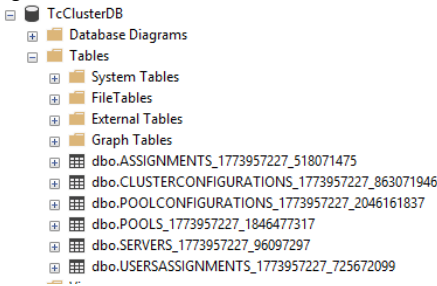- o any issues)

- o Start the pool manager.
- o Search some existing dataset and try to download the named reference file. If you successfully download the files in your local system then FMS and volume access is configured properly.
- o Start the Teamcenter and create some objects.
- o File -> New -> Create.
- o File -> New -> Revise.
- o Create Dataset with named reference file.
- o Search the dataset in production system, if you are not able to find it then
- o imported database is pointing to staging volume.

How to copy the volume and link to existing TC

Environment Set Up:

- Make sure now you have logged in with new service account allocated to your environment.
- Check FMS_HOME variable and other variables are reflecting.
- Set the folder permission to Teamcenter installation folder for new service account
- Delete the windows service like FSC*
- Create new service using following command.
  - o installfsc.bat %JAVA_HOME% %FSC_HOME% FSC_tmgssetplm14
- Rename the fsc_hostname.xml and fms mast file fmsmaster_FSC_hostname with new server hostname value.
- Update fsc id in fms master file and other environment specific parameter values
- Update transientvolume id, you can run backup xmlinfo and copy the same value.
- Update the files in tcroot\tccs\fcc.xml.
- Run following 2 tier commands
  - o Run install -ayt to test connectivity
  - o install -regen_schema_file
  - o install -gen_xmit_file.
- Update transient volume directory in fms master and transient root dir preference
- Copy all volumes again from the cloned server.
- Run below command with export mode and update the preference and then run with import mode.
- preferences_manager -mode=import -scope=SITE -action=OVERRIDE -file=D:\Apps\Export_Pref.xml
- Run the following commands to create cache.
  - o generate_client_meta_cache -u=dcproxy -p=dcproxy -g=dba delete all || exit /b !ERRORLEVEL!.
  - o generate_metadata_cache -u=dcproxy -p=dcproxy -g=dba -force || exit /b !ERRORLEVEL!.
  - o generate_client_meta_cache -u=dcproxy -p=dcproxy -g=dba generate all || exit /b !ERRORLEVEL!
- Clear cache and check if 2 tier is working, and check 2 tier commands, verify connecting to right database.

Teamcenter Service Setup:

- Update the following table from TcClusterDB instance.
- POOLCONFIGURATIONS_1773957227_2046161837
  - o Login to SQL

  - o RMB on POOLCONFIGURATIONS_1773957227_2046161837 > Select top 100 row > check hostname.
  - o update POOLCONFIGURATIONS_1773957227_2046161837 set HOSTNAME='TMGSSETPLM03'
  - o update POOLS_1773957227_1846477317 set MANAGER_URI='http://TMGSSETPLM03:8087'
  - o update POOLS_1773957227_1846477317 set MUX_URI='http://TMGSSETPLM03:8086/PoolA'

- POOLS_1773957227_1846477317
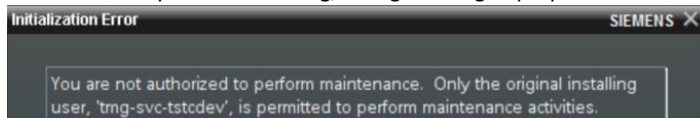- Update following files for Dispatcher.
  - o Service.properties

- o DispatcherClient.config
- o transclient.properties
- o transmodule.properties
- o transscheduler.properties
- Update the following files for Micro Services
  - o start_service.bat
  - o tcgql.json
  - o service_dispatcher.json
  - o req_import_service.json
  - o req_export_service.json
  - o gateway.json
  - o file-repo.json
  - o eureka.json
  - o darsi.json
  - o start_service.bat
  - o config_backup_20211027163308.json
  - o config.json

- Update D:\App\Teamcenter\13\TC_ROOT\web\Teamcenter1\webapp_root\WEB-INF\web.xml
- Update " tc.war\WEB-INF\lib \JETIAdapter\jetiAdapterCfg.properties" and web.xml
  - o Go to Jaboss > standalone>deployment
  - o Open the tc_war file in 7zip.

  - o Edit the JETIAdapter.jar and modify the

  jetiAdapterCfg.properties - Notepad
  File Edit Format View Help
  # The list of pool manager URIs separated by semicolon
  Server_Manager_URIs=http://TMGSSETPLM03.epiroc.group:8086/PoolA

  - o And then redeploy the war file after clearing jboss cache, if you are updating existing file then no need to deploy again (F:\App\Jboss\jboss-eap-7.3\standalone\deployments)

Change Service Account
- To fix the below reported error, update the TC_ROOT\install\configuration.xml with new service account details.
- If there are any services running, change the logon properties with new service account.

Initialization Error   SIEMENS ✕

You are not authorized to perform maintenance. Only the original installing user, 'tmg-svc-tstcdev', is permitted to perform maintenance activities.

Client Package generation: VDI Package –

- Take the PLM05 package in image VDI and replace all instance of PLM05 to PLM14 and update the short cut
- Add new launcher batch file "C:\App\xcad\ipem\ac_ipem_start_plm14.bat" by updating the env name
- Then commit the new plm14 ipem repo in Azure.

Citrix Package -

- Need to have separate AD policy to be created which will be handled by the Citrix team itself.
- Then use above TC package and deploy
- Ask Citrix team to create new application for RAC and AWC.

Important Note:
- Sometimes few jar and exe would have been corrupted and not working, so copy below files manually.
- Copy the volume files manually to respective volume directory
- Copy micro services related jar,lib etc. related folders manually

Issue after cloning: -
- Database login does not work through utility
  - o Issue with database password in profilvar.bat.
  - o TC_DB_CONNECT
  - o Reset the password.
  - o Update into profilvar.bat as well as check database name before password string

  set TC_DB_CONNECT=tmgsvcplm18:

- Fsc does not start after installation : problem with install.bat, you had manually set fsc home path to tccs which is wrong
  - Fsc does not start after installation, because of issue with installfsc.bat
  - Non need to create FMS_Home equal to FSC_HOME details
  - Solution: - check installfsc.bat and recreate the FSC again using same .bat file

- Server manger failed to login to Tcdbcluster
  - GO to SQL
  - Check the tcdbcluster user if you did not get open configuration.xml and search by **databaseName**. Below you will get user.
  - Regenerate the encrypted password for it.
  - Open "F:\App\Teamcenter\13\TC_ROOT\pool_manager\confs\config1\serverPool.properties"
  - Update the MANAGER_DB_CONNECT password

- Check Env:- it is not listed during the login.
  - Run the tem.bat> modify 2tier settings> add the tccs details and install
  - Check installable at shared location add those path if require
  - Once it is done, restart the system
  - Still env does not list, kill fsc and restart through cmd
  - Restart is must after above operation