Activating Your TSplus License (Offline)

Retrieve your Activation Key

When you order a license, connect to our <u>Licensing Portal</u> and enter your Email Address and your Order Number:

Licensing Management App		Support
Customer Portal - Get you Email Order Number Login to my Customer Portal	IF License Please type your email address Please type your Order Number specified in the order confirmation email. If you have made several orders, any order number will do.	
	# 11 = 1 1	
	Partners / Resellers	

Download the Customer Portal User Guide for more information about how to use it.

Your activation key will be displayed at the top of the dashboard:

icensing N	Management App	Home (Orders					Logout
Licen		You	ur activation key	/ is: NAQR-				
Application	Numéro de Série / Computer	Jours	Utilisateurs	Edition	Numéro de Commande	Date	Support?	Actions
TSplus	P30	-	3	Enterprise	11408	2020-01- 27	I Voir	E Détails
TSplus	P65	-	10	Enterprise	JWT19	2019-05- 29	I Voir	E Détails
TSplus	P24	•	25	Enterprise	JWT18	2018-10- 19	x	E Détails
TSplus	P6E	•	10	Enterprise	JWT17	2017-09- 25	×) Détails
TSplus	P62	-	5	Enterprise	JWT16	2016-09- 30	I Voir	Détails

Locate the Administrator Tool on your desktop



If you cannot find the admin tool shortcut, it should be located in the desktop folder on the administrator account used to download TSplus. You can also find the TSplus folder on this path: 'C:\Program Files (x86)\TSplus\UserDesktop\files'.

Double-click on it, then click on the license tab.

Here you can see the status of your TSplus license, as well as your Computer ID and Computer Name:

TSplus - Administration Console	-	×
TSPLUS Rer	mote Access Management Console	
Ф номе		
	Cr Activate your License	
	Eus Now	
S WEB	C License Status	
FARM	Orall License : 15 days remaining. Orall Computer ID: 2222	
SESSIONS	Computer ID: 2222 Computer name: WIN-A1L00CN0E56	
SYSTEM TOOLS		
ស៊្វុ ADVANCED	Editions	
값 ADD-ONS	System Edition	
	Printer Editon	
	Mobile Web Edition	
	Enterprise Edition	

Activate your licenses on an offline TSplus server

Click on the "Activate your License" button. A popup appears and displays a quite long URL address.

Copy this URL on an internet-connected computer browser and access it in order to retrieve a license file:

🕞 License Activation	- 🗆 X
License Activat	ion
Copy activation URL	https://licenseapi.dl-files.com/licensing/activation/start/d7cbcf904fbabea3cf60f2d7898429924d78512a8518421ccf8efd8d0
ලැ Activate your lic	ense

Enter your Activation Key:

Application de Gestion de	es Licen: × +	-	×
← → C 🔒 license	eapi.dl-files.com/licensing/activation/start/d7cbcf904fbabea3cf60f2d7898429924d78512 🖏 🖈		
Licensing Ma	anagement App		
	License Activation		
	Please enter your Activation Key:		
	XXXXX-XXXXX-XXXXX		
	You will find your Activation Key in our order confirmation email. Please contact Support should you require any help activating your license.		
	Next >		

Your license is then validated. Download the license file by clicking on the corresponding button:

Application de Gestion d	des Licen: × +	-	×
← → C 🔒 licen	seapi.dl-files.com/licensing/activation/start/d7cbcf904fbabea3cf60f2d7898429924d78512 🖏 🖈		
Licensing Ma	anagement App		
	License Activation		
	Your license has been activated! • TSplus Enterprise edition - 5 users • Update/Support services for TSplus Enterprise edition - 5 users - 3 years • TSplus Advanced Security Ultimate edition		
	Thank you for your business! You can now safely close this window.		
	Download License file for Offline Activation		

This license file must then be copied back to the server in order to finish the offline activation process:

🕞 License Activation	– 🗆	×
License Activati	on	
Copy activation URL	https://licenseapi.dl-files.com/licensing/activation/start/d7cbcf904fbabea3cf60f2d7898429924d78512a8518421ccf8	efd8d0
िन Activate your lice	ense	

→ ✓ ↑ ↓ > This F	PC > Downloads			✓ Ö Search D	ownloads)
rganize 🔻 🛛 New folder						(
📌 Quick access	^	Name	Date modified	Туре	Size	
📃 Desktop	*	🎪 jre-8u191-wind	11/16/2018 4:35 PM	Application	1,846 KB	
🕹 Downloads	*	Iicense_P6B_0F	9/11/2020 1:02 AM	LIC File	1 KB	
Documents	*	퉣 Setup-Remote	5/5/2020 9:02 AM	Application	6,093 KB	
Pictures	*	👻 Setup-TSplus-S	9/10/2020 12:14 PM	Application	4,197 KB	
Fictures	*	🐻 UpdateRelease	9/3/2020 2:28 PM	Application	685 KB	
Desktop	~					
File <u>n</u> am	e: license_P6B_0F					,

A message will confirm that your license was retrieved succesfully:

License Activation	X
License retrieved successfully	
ОК	

You will then have to select the corresponding licenses / support to activate and a message confirming that all your products/support are now activated.

N.B: You can still download license.lic files on the Licensing Portal for TSplus Legacy Versions. <u>Download the Customer Portal User Guide</u> for more information about how to use it:

License Activation

If you are using a recent version of TSplus then license activation is very easy:

- Open TSplus AdminTool
- · Click on the "License" tab
- · Click on the "Activate your license" button
- Enter your Activation Key: 6BAP-

Legacy License File

If you are using a legacy version of TSplus then you will need a license file to activate your product.

Please only do this for:

- TSplus version 12 or lower
- TSplus Long Term Support (LTS) 12
- TSplus Long Term Support (LTS) 11

Serial Number:

P00 000 000

Apply Serial Number

Activating Your TSplus License (Online)

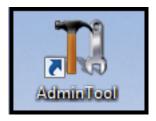
Option One

This will appear on Windows startup :

		_	×
	Thank you for using TSplus, a great product for:		
	Windows W7, W8, W10, 2008,2012 or 2016		
	The product includes all options for 5 users and 15 days.		
Serial number: P	-		
	Buy Now! Continue		

Option Two

Locate the Administrator Tool on your desktop :



 If you cannot find the admin tool shortcut, it should be located in the desktop folder on the administrator account used to download TSplus. You can also find the TSplus folder on this path: 'C:\Program Files (x86)\TSplus\UserDesktop\files'.

Double-click on it, then click on the license tab.

Here you can see the status of your TSplus license, as well as your Computer ID and Computer

Name:

1 TSplus - Administration Console	-	×
TSPLUS	Remote Access Management Console	
М НОМЕ	ⓒ규 Activate your License	
	Euy Now	
S WEB	License Status	
FARM	© Trial License : 15 days remaining. ← Computer ID: 2222	
SESSIONS	Computer name: WIN-A1L00CN0E56	
SYSTEM TOOLS		
ស៊្វែ ADVANCED	Editions	7
었 ADD-ONS	System Edition	
	Printer Edtion	
	Mobile Web Edition	
	C Enterprise Edition	

title : "Activate your licenses on an online TSplus server"

When you order a license, connect to our <u>Licensing Portal</u> and enter your Email Address and your Order Number:

Licensing Management App		Support
Customer Portal - Get your Lic	cense	
Email	Please type your email address	
Order Number	Please type your Order Number specified in the order confirmation email. If you have made several orders, any order number will do.	
Login to my Customer Portal		
	# 11 = 1 1	
	Partners / Resellers	

Download the Customer Portal User Guide for more information about how to use it.

Your activation key will be displayed at the top of the dashboard:

		Yo	ur activation key	/ Is: NAOR-				
Licen	ces							
Application	Numéro de Série / Computer	Jours	Utilisateurs	Edition	Numéro de Commande	Date	Support?	Actions
TSplus	P30	-	3	Enterprise	11408	2020-01- 27	I Voir	E Détails
TSplus	P65	-	10	Enterprise	JWT19	2019-05- 29	I Voir	III Détails
TSplus	P24	•	25	Enterprise	JWT18	2018-10- 19	×	I Détails
TSplus	P6E	•	10	Enterprise	JWT17	2017-09- 25	×	i≣ Détails
TSplus	P62	•	5	Enterprise	JWT16	2016-09-	Uoir	Détails

You can then go to the License Tile of the AdminTool, click on the "Activate your License" button, enter this activation key and click on "Next".

TSplus - Administration Console	-	Х
TSPLUS	Remote Access Management Console	
М НОМЕ	िन्न Activate your License	1
	Euy Now	
S WEB	License Status	
E FARM	Trial License : 15 days remaining. Computer ID: 2222	
SESSIONS	Computer name: WIN-A1L00CN0E56	
SYSTEM TOOLS		
ស៊្វែ ADVANCED	Editions	
Հշ add-ons	System Edition	
	Printer Edtion	
	Mobile Web Edition	
	C Enterprise Edition	

License Activation	
Please enter your Activation Key:	

You will get a list of all the available licenses/supports assigned to this activation key, i.e. all licenses/supports not activated yet:

	ise Activation
Please se	elect the license(s) you want to activate on this computer:
TSplus	
	TSplus Enterprise edition - 5 users
	O No Updates/Support
	O Update/Support services for TSplus Enterprise edition - 5 users - 3 years
TSplus A	Advanced Security
	TSplus Advanced Security Ultimate edition
f you hav	ses listed above are all the licenses currently available for activation on this computer. ve purchased multiple units, only one will be displayed in this list for this computer, and you le to activate the other units on other computers.
< Bac	k Next >

Check one or more items and click on the "Next" button. Please note that you can activate several products at the same time by checking several products/support!

License Activation	
Your license has been activated!	
 TSplus Enterprise edition - 5 users 	
 Update/Support services for TSplus Enterprise edition - 5 users - 3 years 	
TSplus Advanced Security Ultimate edition	
Thank you for your business!	
You can now safely close this window.	
	Pinis
	Finish

All your products/support are now activated (in this example, both TSplus with support and TSplus Advanced Security have been activated at once).

<u>_</u>	Permanent license activated Enterprise edition - Unlimited users
6	Computer ID: 2222
	Computer name: DESKTOP-F304H4I
	End of support date: 5/14/2023
Lice	End of support date: 5/14/2023 Ise Status
_	
_	ise Status

Refresh your License Data by clicking on the corresponding button at the bottom of the page, it will synchronize information with our Licensing Portal:



License	×
License has been synchronized with l	icensing portal
	OK

N.B: You can still download license.lic files on the Licensing Portal for TSplus Legacy Versions. <u>Download the Customer Portal User Guide</u> for more information about how to use it:

License Activation

If you are using a recent version of TSplus then license activation is very easy:

- Open TSplus AdminTool
- · Click on the "License" tab
- · Click on the "Activate your license" button
- Enter your Activation Key: 6BAP-

Legacy License File

If you are using a legacy version of TSplus then you will need a license file to activate your product.

Please only do this for:

- · TSplus version 12 or lower
- TSplus Long Term Support (LTS) 12
- TSplus Long Term Support (LTS) 11

Serial Number:

P00 000 000

Apply Serial Number

Activating your support license file

The 8.20 version of TSplus introduced a new and easy way to handle your annual support contract. Please update your version to the latest release before following this procedure.

The support services include our worldwide Ticket/Email support service, Forum access, license rehosting, FAQ and tutorial support. The Update Services include the delivery of Update codes, the right to install and to use any new release, patch and updates.

The update code is requested once a year to be able to apply the Update Release patch. It is delivered by our support team on demand. This update code is now replaced with a support.lic file that you can activate in the licensing tile of the Admin Tool.

We are investing every day to enhance TSplus and to fix all known issues. So, we recommend all our customers to keep their TSplus installation updated. The annual fee is not expensive and is available on our Store Page.

Step One

Locate the Admin Tool on your desktop :



Double-click on it, then click on the license tile.

• If you cannot find the admin tool shortcut, it should be located in the desktop folder on the administrator account used to download TSplus. You can also find the TSplus folder on this path: 'C:\Program Files (x86)\TSplus\UserDesktop\files'.

You can now see the Serial Number :

🚺 TSplus - Administration Conso	le -	-	×
TSPLUS	Remote Access Management Console		
М НОМЕ	ⓒ규 Activate your License		
	Euy Now		
S WEB	License Status		
FARM	िन्न Trial license 6 days - Enterprise edition - 5 users		
SESSIONS	Serial Number:		
SYSTEM TOOLS			
袋 ADVANCED	Editions		
Հ굿 ADD-ONS	System Edition		
	Printer Edtion		
	Mobile Web Edition		
	O Enterprise Edition		

Step Two

Connect to the Licensing Portal by entering your Email address and your Order Number:

Licensing Management App		Support
Customer Portal - Get your Lic Email Order Number Login to my Customer Portal	Please type your email address Please type your Order Number specified in the order confirmation email. If you have made several orders, any order number will do.	
	E II = II Partners / Resellers	

<u>Download the Customer Portal User Guide</u> for more information about how to use it.

You will get a Support.lic file.

Step Three

Click on the "Activate your license" tile:

1 TSplus - Administration Console	e _	×
TSPLUS	Remote Access Management Console	
Ф номе		
	ⓒ _{국가} Activate your License	
	Euy Now	
S WEB	License Status	
FARM	Irial License : 15 days remaining. Computer ID: 2222	
SESSIONS	Computer ID: 2222	
SYSTEM TOOLS		
成 advanced	Editions	
ՀՀን ADD-ONS	System Edition	
ତିଙ୍ଗ LICENSE	O Printer Edtion	
	Mobile Web Edition	
	C Enterprise Edition	
Then select "Ext	end Support period":	

T Activation	×
What do you want to do?	
Activate License (license.lic file)	
Extend Support period (support.lic file)	
Extending your support period	×
When you did place your order, a support file named 'support.lic' has been created for you. To extend your support period you have to select the place where you did store this support.lic file	
OK	

Then locate your Support.lic file and open it in order to activate it!

Licensing	Х
Your support period has been successfully extended!	
ОК	

TSplus Administration Tool overview

After installing TSplus, your server is immediately ready to go.

However, you can customize all the system parameters with a powerful Administrator Tool.

To do so, click on the following icon created on your Desktop:



The Administrator Tool will then be displayed:

Want to get help on a feature of TSplus Admin Tool quickly? Just **click on a tile or on a tab** to go to the matching help!

TSplus - Backup Settings

On the TSplus tab, you can configure TSplus settings.

You can Backup or Restore TSplus data and settings by clicking on the button "Backup/Restore" on the top:

🗱 TSplus - Administration Console -		- 🗆 🗙
TSPLUS Remote Acce	ess Management Console	
APPLICATIONS Figure 7 F	sup / Restore your Server Parameters Backup / Restore your Server Parameters rour Server Parameters Backup	×
E FARM	your Server Parameters up found Restore	
System tools		
- ₩ ADD-ONS		
©	re vour Server Parameters	
Backup your Server Para		
Restore your Server Para	meti Backup ×	
2019-02-07_12-57-36	Backup completed	Restore
	ОК	

The command usage is described below:

•

Backup:

TSplus.exe /backup [optional path to a directory] By default, the backup will be created in the archives directory located in TSplus TSplus Security setup folder. However, the backup may be saved in a specified folder. Relative and absolute paths are allowed.

•

Restore: TSplus.exe /restore [path to a backup directory] The specified backup directory must contain a data and a settings folder, as created by the /backup command.

Please follow the steps below to migrate TSplus from computer A to computer B:

- 1. On computer A, please click on the Backup button to create a new backup. Settings and data will be saved in the archives directory, located on the C:\Backupparam folder.
- 2. Copy the newly created backup folder (e.g. named backup-2021-01-29_15-01-29), including all content, from the archives directory on computer A to the archives directory on computer B.
- 3. On computer B, from the Backup / Restore window, in the "Restore" section, select the relevant backup name to be restored.
- 4. Then, click on Restore Settings Only to restore the settings. Alternatively, it is possible to click on Restore to restore all data and settings, which is not recommended for a migration but useful to restore TSplus on computer A.
- 5. Please wait at most 2 minutes for the settings to be reloaded by TSplus features.

Advanced Features - Contextual Menu

Overview

Since TSplus version 12.50, a new "**Send to Client**" menu can be enabled under the Advanced > Contextual Menu tab to easily send files to client workstation. This feature works with all connections methods.

1 TSplus - Administration Console	- 11.11			—	Х
TSPLUS	Remote Access Managen	nent Console			
 MOME APPLICATIONS PRINTER WEB FARM SESSIONS SYSTEM TOOLS ADVANCED ADD-ONS LICENSE 	Backup / Restore your Se Advanced Settings Advanced Settings Product Security Security Security Contextual menu Restore menu Re	erver Parameters	Value Default (No) Default (Top)		

By default, this feature is disabled. Select the "Yes" value then click on "Save", in order to enable it :

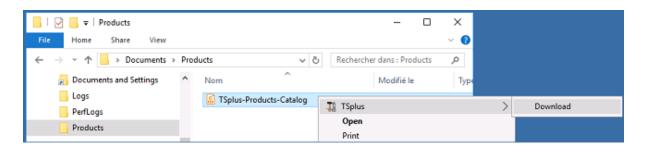
য TSplus - Edit Setting	Х
Enabled	
_	
Description:	
Add a button in the contextual menu displayed by right clicking on a file, folder or a multiple selection in the File Explorer. It allows users to quickly send selected objects to their local computer.	^
Value:	~
Yes	\sim
Save Cancel	

You can also change its position. By default, it will show on top:

ᠯ TSplus - Edit Setting	×
Position	
Description:	
Position of the button in the contextual menu.	^
	~
Value:	
Тор	~
Save	Cancel

This is a right-click contextual menu. Just select the desired folder or files, right-click on it, select

the "TSplus" tab and simply click on "Download":



You will find your download into the Webfile folder and into the "Downloads" folder of your web browser:

🛫 WebFile sur MITU7JBD7YQ7H2				_	
← → ✓ ↑ 🔄 > Ce PC > WebFile sur MITU7JBD7YQ7H2 🗸 🗸 Ö			Rechercher dans : V	VebFile sur 🔎	
🟥 Documents	^	Nom ^ Modifié le		Туре	Taille
📰 Images		🕵 TSplus-Products-Catalog		Foxit Reader PDF	1 061 Ko
👌 Musique					
🖊 Téléchargements					
🚆 Vidéos					
🛫 WebFile sur MITU7JBD7YQ7H2	~				
1 élément					

Advanced Features - Lockout

Overview

On this tab, you can enable/disable and configure <u>TSplus Lockout</u> settings.

1 TSplus - Administration Console			_	Х
TSPLUS	Remote Access Manage	ment Console		
 ☆ HOME □ APPLICATIONS 	Backup / Restore your	Server Parameters		
PRINTER	Advanced Settings	Name Enabled	Value Yes	
FARM	Contextual menu	Limit Login Interval Lockout Period	10 900 1800	
SESSIONS				
없 advanced				
값 add-ons ⓒ규 license				

Enable/Disable Lockout Feature

The Lockout Feature is enabled by default. You can disable it by changing the value from "Yes" to "No" value on this window, then click on save.

TSplus - Edit Setting	×
Enabled	
Description:	
TSplus prevents brute-force attacks by locking accounts following repeated failed login attempts through the W portal.	eb
	~
Value:	
Yes	~
Save	ancel

Limit

The Lockout Limit defines the number of allowed failed login attempts from the Web portal before the account is locked out (default is 10). You can modify this value by entering the desired value into the corresponding field and click on save.

🛺 TSplus - Edit Setting	×
Limit	
Description:	
The Lockout Limit defines the number of allowed failed login attempts from the Web portal before the account is locked out (default is 10).	^
Value:	~
10	
Save Cancel	

Interval

The Lockout Interval specifies an interval of time between failed login attempts. If a failed login attempt occurs after the Interval defined, then the counter of failed login attempts is reset for the relevant user (in seconds, default is 900 seconds). You can modify this value by entering the desired value into the corresponding field and click on save.

×
~

The Lockout Period specifies the duration an account is locked out and unable to login (in seconds, default is 1800 seconds). The period of time a user is locked out is the greatest value between LockoutPeriod and LockoutInterval settings. Therefore, when changing LockoutPeriod's value, one should update the LockoutInterval setting with a smaller value to ensure a relevant behavior. You can modify this value by entering the desired value into the corresponding field and click on save.

^{###} Period

🛺 TSplus - Edit Setting	×
Period	
Description:	
The Lockout Period specifies the duration an account is locked out and unable to login (in seconds, default is 1800 seconds). The period of time a user is locked out is the greatest value between LockoutPeriod and LockoutInterval settings. Therefore, when changing LockoutPeriod's value, one should update the LockoutInterval setting with a smaller value to ensure a relevant behavior.	<
Value:	
1800	

Advanced Features - Logs

Overview

On this tab, you can configure TSplus Logs settings.

By default TSplus doesn't create logs, to avoid performance issues.

Logs exist to find more easily the origin of the errors encountered on TSplus and you can enable them by doing so:

go to C:\wsession

•

create the folder 'Trace'. Logs will automatically be created there, per user.

You will need to activate the log generation in the AdminTool > Advanced > Logs

TSplus - Administration Console				- 🗆	Х
	Remote Access Manager	ment Console			
 ☆ HOME △ APPLICATIONS 	Backup / Restore your S	ierver Parameters			
PRINTER	Noduct 😯 Security	Name Web portal log Session opening log	Value WARN Disabled		
	• Cockout • Contextual menu • Logs	Session control log Load-Balancing log AdminTool application log Contextual menu log	INFO WARN WARN OFF		
SESSIONS					
값 add-ons ⓒ규 License					

There are 5 types of logs:

The Web Portal log,

- The Session Opening log,
- The Session control log,
- The Load-Balancing log and
- The AdminTool application (interface) log.

Log levels correspond to different components, our support team will tell you what value to put according to the problem encountered.

Here are the different log file names and locations:

•

Web Portal log: "C:\Program Files (x86)\TSplus\Clients\www\cgi-bin\hb.log"

Session Opening log: "C:\wsession\trace"

•

Session control log: "C:\Program Files (x86)\TSplus\UserDesktop\files\APSC.log"

•

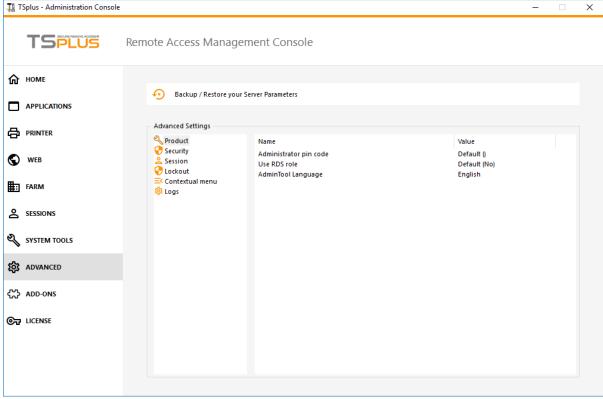
•

- Load Balancing log: "C:\Program Files (x86)\TSplus\UserDesktop\files\svcenterprise.log"
- AdminTool application log: "C:\Program Files (x86)\TSplus\UserDesktop\files\AdminTool.log"
- RDS-Knight / TSplus Advanced Security: "C:\Program Files (x86)\TSplus-Security\logs"

Advanced Features - Product

Overview

On this tab, you can modify TSplus settings by adding an AdminTool Pincode, use the Windows RDS role and customize the background color and language of the AdminTool.



Administrator Pin Code

The Administrator can secure the Administrator Tool access by setting a pin code which will be asked at every start, on the Advanced tab of the AdminTool, under the Product Settings:

TSplus - Administration Cons	ole -			- 🗆	\times
TSPLUS	Remote Access Mana	agement Console			
✿ HOME ■ APPLICATIONS		your Server Parameters			
	Advanced Settings Noroduct Security	Name	Value		
🕤 WEB	Security Session	Administrator pin code U A TSplus - Edit Setting	Default ()		
FARM		A Administrator pin code Description:			
		AdminTool will ask for a password if thi	is value is not empty.		
SYSTEM TOOLS					
없 ADVANCED					
슈가 ADD-ONS		Value: 1234			
ତିନ୍ଦ୍ର license		Save	Cancel		

Use RDS role

Multi-session role and Windows RDS role are not compatible. You can either select the Windows RDS role, or TSplus Multi-session role.

- When using Multi-session role, the Windows RDS role must be uninstalled.
- When using the Windows RDS role, this Windows role must be installed.

WARNING: changing role requires to reboot the system. When selecting the Windows Remote Desktop, only one user at a time will be allowed on a workstation system.

TSplus - Edit Setting	×
Description:	
Multi-session role and Windows RDS role are not comp You can either select the Windows RDS role, or TSplus N session role. - When using Multi-session role, the Windows RDS role uninstalled. -When using the Windows RDS role, this Windows role installed. WARNING: changing role requires to reboot the system.	fulti- must be must be
Value:	
No	~

To use the Windows RDS role, select the "Yes" value and Save.

Modify the AdminTool Background color

Customize AdminTool's background color using an hexadecimal code (for example: 0xFFFFF).

TSplus - Edit Setting	\times
AdminTool background color	
Description:	
Customize AdminTool's background color using an hexadecimal code (for example: 0xFFFFF).	^
	\sim
Value:	
OxFFFFFF	
Save Cancel	

Modify the AdminTool Language

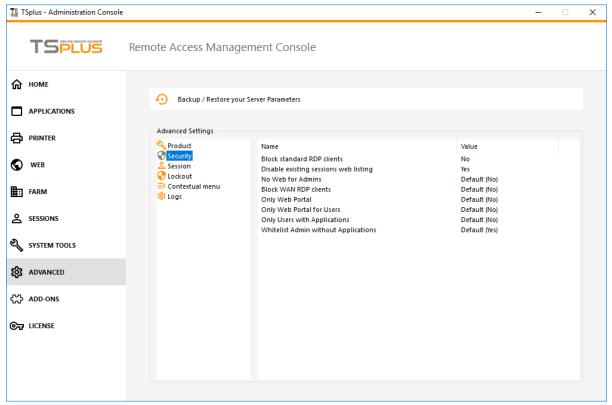
Select your preferred language for the AdminTool among the 21 available.

TSplus - Edit Setting	×
AdminTool Language	
Description:	
Set the AdminTool interface language.	~
	~
Value:	
English	~
English	
French	
German	
Dutch Spanish	
Italian	
Portuguese	
Polish	
Russian	
Ukrainian	
Hungarian	
Czech	
Turkish Chinese	
Traditional Chinese	
Japanese	
Korean	
Arabic	
Farsi	
Hebrew	
Amenian	

Advanced Features - Security

Overview

On the Security section of the Advanced features, you can block, disable or customize connection types for users.



Block Standard RDP Clients

Select the "Yes" value if you wish to deny access to standard RDP clients such as mstsc to your users.

👖 TSplus - Edit Setting	×
Block standard RDP clients	
Description:	
Deny access to standard RDP clients such as mstsc.	~
Value:	
No	~
Save Cancel	

Disable existing sessions web listing

This listing is required for Load-Balancing Sticky Sessions feature and is enabled by default. If you wish to disable it, select the "No" value on this window, then click on save:

🛺 TSplus - Edit Setting	×
Disable existing sessions web listing	
Description:	
Do not list current sessions in public server heartbeat. This listing is required for Load-Balancing Sticky Sessions feature.	^
	~
Value:	
Yes	\sim
Save Cancel	

No Web for Admins

Disable the Web Portal for Administrators by selecting the "Yes" value:

🛺 TSplus - Edit Setting	×
No Web for Admins	
Description:	
Web Portal is forbidden for Admins accounts.	^
	v
Value:	
No	~
Save	Cancel
Surc	curreer

Block WAN RDP clients

Deny access from standard RDP clients connected from outside the LAN by selecting the "Yes" value.

🛺 TSplus - Edit Setting	\times
Block WAN RDP clients	
Description:	
Deny access from standard RDP clients connected from outside the LAN.	^
	\sim
Value:	
No	\sim
Save Cancel	

Only Web Portal

Make Web Portal access mandatory for every user by selecting the "yes" value.

👖 TSplus - Edit Setting	×
Only Web Portal	
Description:	
Web Portal access is mandatory for every users.	^
	~
Value:	
No	~
Course of the second seco	Consul
Save	Cancel

Only Web Portal for Users

Make Web Portal access mandatory for every user, except the Admins by selecting the "yes" value.

TSplus - Edit Setting	\times
Only Web Portal for Users	
Description	
Description:	
Web Portal access is mandatory, except for Admins.	^
	V
Value:	
No	\sim
Save	

Only Users with Applications

Allow access only for users with, at least, one assigned application by selecting the "yes" value.

TSplus - Edit Setting	\times
Only Users with Applications	
Description:	
Allow access only for users with, at least, one assigned application.	
	\sim
Value:	
No	\sim
Save Cancel	

Whitelist Admins without Applications

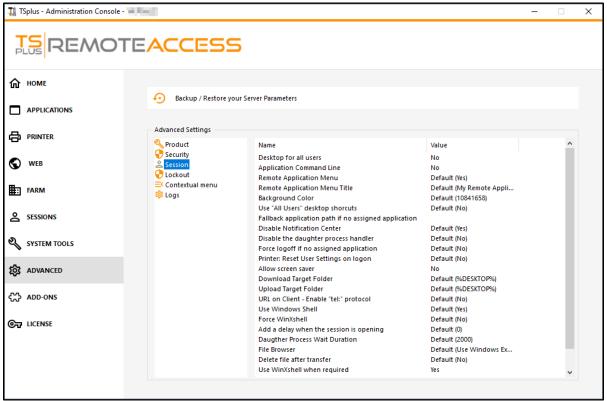
Allow access for admins even if they do not have any assigned application and "Only Users with Applications" is enabled. This feature is enabled by default. If you wish to disable it, select the "No" value on this window, then click on save:

🛺 TSplus - Edit Setting	×
Whitelist Admin without Applications	
Description	
Description:	
Allow access for admins even if they do not have any assigned application and "Only Users with Applications" is enabled.	^
	~
Value:	
Yes	\sim
Save Cancel	

Advanced Features - Session

Overview

This section of the Advanced tab allows you to configure user rights and aspects on their sessions.



###

Desktop for all users

Enable a full Desktop for all users by selecting the "Yes" value on this window, then click on save:

🛺 TSplus - Edit Setting	×
Desktop for all users	
Description:	
All the users will have a full desktop.	^
	~
Value:	
No	\sim
Save	Cancel
Jave	Cancer

###

Application Command Line

Application Command Line can be specified on client side. This feature is enabled by default. If you wish to disable it, select the "No" value on this window, then click on save:

👖 TSplus - Edit Setting	×
Application Command Line	
Description:	
Application Command Line can be specified on client side.	^
Value:	Ý
Yes	\sim
Save Cancel	

Remote Application Menu

Remote Application Menu will be added on user's PC. This feature is enabled by default. If you wish to disable it, select the "No" value on this window, then click on save:

🛺 TSplus - Edit Setting	×
Remote Application Menu	
Description:	
Remote Application Menu will be added on user's PC.	^
	\sim
Value:	
Yes	\sim
Save Cancel	

You can modify the title of the Remote Application Menu. The default one is "My Remote Applications". If you wish to modify it, enter the desired title, then click on save:

🛺 TSplus - Edit Setting	×
Remote Application Menu Title	
Description:	
Title to display in Remote Application Menu	^
	~
Value:	
My Remote Applications	
Save	Cancel

Background color

Customize the user sessions background color using a COLORREF code (for example, the default one is: 10841658).

TSplus - Edit Setting	×
Background Color	
Description:	
Customize the user sessions background color using a COLORREF code (for example: 10841658).	^
Value:	v
10841658	
Save Cancel	

Use "All Users" desktop shortcuts

Copy the shortcuts existing in Windows shared desktop in the Taskbar and Floating Panel. Enable this feature by selecting the "Yes" value on this window, then click on save:

1 TSplus - Edit Setting	×
Use "All Users" desktop shorcuts	
Description:	
Copy the shortcuts existing in Windows shared desktop in the Taskbar and Floating Panel.	
	~
Value:	
No	\sim
Save Cancel	

Fallback application path if no assigned application

Run this application if no application is assigned to the user when he logs in. There is no value by default. Enable this feature by entering a "Yes" value on this window, then click on save:

🛺 TSplus - Edit Setting	Х
Fallback application path if no assigned application	
Description:	
Run this application if no application is assigned to the user when he logs in.	^
Value:	Ÿ
Course L	
Save Cancel	

Skip daughter process search when launching applications. It will cause premature logoff if a published application uses daughter process. This feature is disabled by default. Enable this feature by selecting the "Yes" value on this window, then click on save:

^{###} Disable the daughter process handler

🛺 TSplus - Edit Setting	×
Disable the daughter process handler	
Description:	
Skip daughter process search when launching applications. It	~
will cause premature logoff if a published application uses daughter process.	
	\sim
Value:	
No	\sim
Save Cancel	

Force logoff if no assigned application

The user will be automatically logoff if he has no application assigned to him. This feature is disabled by default. Enable this feature by selecting the "Yes" value on this window, then click on save:

👖 TSplus - Edit Setting	×
Force logoff if no assigned application	
Description:	
The user will be automatically logoff if he has no application assigned to him.	^
Value:	
No	\sim
Save Cancel	

Allow screen saver

This feature is disabled by default. Enable Windows screensaver by selecting the "Yes" value on this window, then click on save:

🛺 TSplus - Edit Setting	×
Allow screen saver	
Description:	
Disable Windows screensaver when set to "no".	^
	~
Value:	
No	~
Save	Cancel

Download target folder

Downloaded files will be put on the Desktop by default. If you wish to modify it, enter the desired download folder's path, then click on save:

🛺 TSplus - Edit Setting	×
Download Target Folder	
Description:	
Downloaded files will be put in this folder.	~
	~
Value:	
%DESKTOP%	
Save	Cancel

Upload target folder

Uploaded files will be put in this folder. If you wish to modify it, enter the desired upload folder's path, then click on save:

👖 TSplus - Edit Setting	×
Upload Target Folder	
Description:	
Uploaded files will be put in this folder.	~
	Ť
Value:	
%DESKTOP%	
Save	Cancel
Save	Curreer

Use Windows Shell

Define Windows Shell as default shell. This feature is enabled by default. If you wish to disable it, select the "No" value on this window, then click on save:

🛺 TSplus - Edit Setting	×
Use Windows Shell	
Description:	
Define Windows Shell as default shell.	^
	~
Value:	
Yes	~
Save	Cancel

Force WinXshell

This feature is disabled by default. Force WinXshell alternate shell instead of the default shell by selecting the "Yes" value on this window, then click on save:

👖 TSplus - Edit Setting	×
Force WinXshell	
Description:	
Force WinXshell alternate shell instead of the default shell.	^
	~
Value:	
No	\sim
Save Cancel	

Add a delay when the session is opening

Add additional waiting time at user session logon to get everything initialized. Default value is 0. If you wish to modify it, enter the desired value (in seconds), then click on save:

TSplus - Edit Setting	×
Add a delay when the session is opening	
Description:	
Add additional waiting time at user session logon to get	~
everything initialized.	
	~
Value:	
0	
Save Cancel	

Daughter process wait duration

Time to wait (in milliseconds) before searching for a daughter process when lauching applications.

\times
^
~

File browser

The selected application will be displayed to the user for file selection. Default browser is Windows Explorer. You can use the TSplus file browser by selecting it, then click on save:

🛺 TSplus - Edit Setting	×
File Browser	
Description:	
The selected application will be displayed to the user for file selection.	^
	~
Value:	
Use Windows Explorer	\sim
Save Cancel	

Authorize system to use WinXshell alternate shell instead of the default shell when recommended. This feature is enabled by default. If you wish to disable it, select the "No" value on this window, then click on save:

^{###} Use WinXshell when required

👖 TSplus - Edit Setting	×
Use WinXshell when required	
Description:	
Authorize system to use WinXshell alternate shell instead of default shell when recommended.	the 🔨
	\sim
Value:	
Yes	\sim
Save Cano	el

TSplus Advanced Security

TSplus Advanced Security is available as an Add-On on TSplus AdminTool and is available on the Add-Ons tab of the 12 version:

👖 TSplus - Administration Console	- 🗆 👌
TSPLUS Rer	note Access Management Console
 ☆ HOME △ APPLICATIONS → PRINTER 	TSplus Advanced Security - Protect your server Protect your server from brute-force attacks and foreign intrusions. Block ransomwares before they destroy your files. Restrict users access and lock them in a highly secured environment.
S WEB	Wo-Factor Authentication - Confirm your users' identity
SESSIONS	Passwords can be lost, stolen by phishing attacks, and very often they can even be cracked in a matter of minutes. Two-Factor Authentication solves this problem simply and effectively, and provides an additional security layer - sending a code to the user mobile device.
ADVANCED	II. ServerGenius - Monitor your server
값 ADD-ONS	Server Genius helps to optimize software resources and to reduce unnecessary costs. Give facts and data about server usage (CPU, Memory, I/O, Disks). Track changes, resources usage and events with real-time email alerts.
You can find its full	documentation

on this page

02 août 15:14:27

Lockout Event

<u>TSplus Lockout</u> monitors failed Web Login attempts on your TSplus server. TSplus Advanced Security will show a Lockout Event, after any Web Portal failed attempt like the example below:

A failed login attempt was detected from Web portal for user NS950/HARRY. 1 failed login attempts were detected for this user since 02 août 13:14:26.

"A failed login attempt was detected from Web Portal for user ... 1 Failed login attempt were detected for this user since..."

Brute-Force Attacks Defense

The Brute-Force attack Defender enables you to protect your public server from hackers, network scanners and brute-force robots that try to guess your Administrator login and password. Using current logins and password dictionaries, they will automatically try to login to your server hundreds to thousands times every minute. Learn more about this feature on this page.

On the Web Portal

Brute-force attacks on the Web Portal are blocked when users enter wrong credentials. After 10 attempts during a period of 10 minutes, the Web Portal will prohibit the user to logon for 20 minutes:

	TSPLUS	50
dis.	TSPLUS	
	John] 🗸
		X
	Headquarter	•
	🛛 HTML5 🛛 🔍 RemoteApp	þ
	Too many failed attempts. Please retry later.	
	Log on	

These are the default settings which are customizable on the <u>BruteForce tab</u> of TSplus Advanced Security AdminTool.

You can check all blocked connections and logs on the IP Addresses tile of TSplus Advanced Security Ultimate Protection:

	TSplus Advanced	Security - Ultimate Pro	tectio	on			
т номе	+ Add IP Address	🖉 Edit IP Address	×	Remove IP Address(es)	Q whois		
EVENT VIEWER	IPs in the whitelist will be igno	red by TSplus Advanced Security and will	not be b	olocked by Homeland Access	Protection or Brutefor	ce Attacks Defender fea	tures.
HOMELAND	IP Address	Status		Date	Description		
BRUTEFORCE	213.148.201.59 178.34.152.180 58.244.117.214	Blocked - BruteForce Defe Blocked - BruteForce Defe Blocked - Homeland Prote	nder	14 Mar 2019 04:01:11 11 Mar 2019 21:38:55 11 Mar 2019 04:26:57			
IP ADDRESSES	₩ 49.14.98.70 ₩ 105.14.32.99 202.133.54.73	Blocked - Homeland Prote Blocked - Homeland Prote Blocked - Homeland Prote	tion	11 Mar 2019 03:10:33 11 Mar 2019 00:50:07 10 Mar 2019 23:43:50			
PERMISSIONS	■ 42.51.217.61 ■ 201.158.104.100 ■ 2.182.5.87	Blocked - Homeland Prote Blocked - Homeland Prote	tion tion	10 Mar 2019 20:37:56 10 Mar 2019 17:35:18			
	1 96.189.44.50 4 2.202.33.232	Blocked - Homeland Prote Blocked - Homeland Prote Blocked - Homeland Prote	tion	10 Mar 2019 17:20:58 10 Mar 2019 17:19:15 10 Mar 2019 15:16:59			
SECURE DESKTOPS	<pre>117.224.202.156 125.227.29.199 124.226.216.77</pre>	Blocked - Homeland Prote Blocked - Homeland Prote Blocked - Homeland Prote	tion	10 Mar 2019 14:18:03 10 Mar 2019 08:13:40 10 Mar 2019 07:56:32			
	109.188.131.204 190.60.108.18 68.145.140.120	Blocked - Homeland Prote Blocked - Homeland Prote Blocked - Homeland Prote	tion	10 Mar 2019 06:18:58 10 Mar 2019 05:46:16 10 Mar 2019 02:23:04			
RANSOMWARE	101.230.201.89 93.113.125.89	Blocked - Homeland Prote Blocked - Homeland Prote	tion tion	10 Mar 2019 00:50:43 09 Mar 2019 18:55:01			
SETTINGS	31.220.43.113	Blocked - Homeland Prote	tion	09 Mar 2019 18:07:53			

This functionality is visible and active after the first Web Portal connection.

The complete TSplus Advanced Security documentation is available on this page.

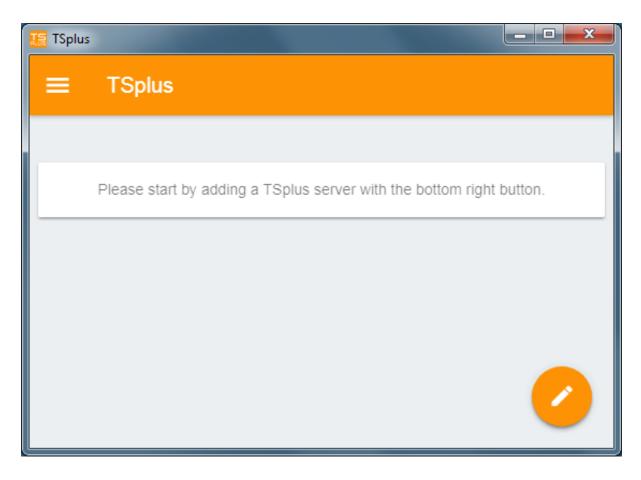
TSplus App Configuration

Manage your servers

The user interface and configuration are simple and intuitive.

TSplus	
≡ TSplus	
My Home PC	¢ 🔳
Head Quarter	¢ 🛛
Accountancy	¢ =
CRM and Inventory	¢ =
	\bigcirc

First, add a TSplus server by clicking on the bottom right button:



Then, add your server information and configure it:

- Enter its its host name or IP address.
- SSL is disabled by default, but you can choose to enable it.

Warning: SSL Activation only works if you installed a valid SSL Certificate on your TSplus server. See <u>this documentation</u> for more information.

- Enter its display name, which is optional.
- Enter your user's credentials with the domain or user name and its password.

TSplus	
← Edit TSplus server	8
TSPLUS SERVER	
Host name or IP address accountancy.tsplus.net	
Use SSL?	
Display name (optional) Accountancy	
CREDENTIALS	
Domain\username John	
Password	

Then click on the top right button to save. You can now click on your server to access your applications:

TSplus	
≡ TSplus	
Accountancy	¢ =
	

🌆 TSp	olus			
÷	Accounta	ncy		
				2
	Notepad	Calculator	Word document	Desktop folder
	4	1		
	Express Invoice	Express Accounts		

Printing

Easily print on your local printer by using the <u>Universal Printer</u>. Since TSplus App 11.40 version, printed documents open with the default PDF reader app.

Settings and Version

Under the top left menu, you can:

- Manage your servers
- Manage your settings
- See the legal information on the About section, and your TSplus App version.



Settings

Various settings are available on the Settings window:

■ Settings	
GLOBAL	
Language Er	nglish 👻
DISPLAY	
Zoom level	50% -
Reduce network usage	
Mouse pointer size	Medium 👻

- You can change the language.
- Modify the display settings by changing the zoom level at your convenience, reduce network usage or choose between 3 mouse pointer sizes: small, medium or large.

Version

On the About window, you can see the legal information as well as your current TSplus App

version :

🌆 TSplus	
≡	About
	TSplus
	11.40.1 Copyright 2017-2018 JWTS All rights reserved

TSplus App

The TSplus App allows you to connect to your TSplus server from any device, anywhere! Just like TSplus, it provides fast and stable remote connections from tablets and smartphones to Windows desktops and business applications. Access your applications and business data in real time and easily print any document and photo you need on the nearest local printer.

	TE Topics	
	E TSplus My Home PC	• •
É	Head Quarter Accountancy CRM and Inventory	0 I 0 I 0 I
		0

For more information and download links, go to the App page on our website.

Hardware Requirements and Operating Systems

The TSplus App is available on PCs, mobiles and tablets with the following OSs: Windows, iOS, Android from 4.4 version and Linux.

Pre-requisites

The host site must be a TSplus Mobile Web or Enterprise system.

The 11.30 release (and over) must be installed on this host.

Application Publishing

Overview

TSplus supports 4 different kinds of Application Publishing:

- <u>Microsoft Remote Desktop</u>. The user will see the full Windows Remote Desktop in the session.
- <u>TSplus Taskbar</u>. Any application, folder, shortcuts, documents... copied on the user's Desktop folder will be published with the TSplus Remote Taskbar. In this case, the user does not have any access to applications other than those decided by the administrator. Application Control has a much finer grain.
- <u>The Floating and Application Panels</u>. All the applications can be published on a mini dropdown list or on a <u>folder</u> which you can customize.
- **Assigning** one, two, three, or more specific applications to a user/group. In this case the user will only see their assigned applications when opening a session.

There is a priority rule to remember: The Microsoft Remote Desktop has the highest priority, then the TSplus Taskbar, then specific applications. If a user has a specific application assigned and TSplus taskbar or Microsoft Remote Desktop, they will not see the specific application because they have a lower priority.

Managing Applications using the Admin Tool

You will add, edit or remove applications using the AdminTool, by clicking on the "Applications" tab -> "Publish":

.¶∦ Т	Splus - Administration Console				– 🗆 X
	TSPLUS	Remote Access Mar	agement Console		
ŵ	HOME	+ Add Application	Cdit Application	× Remove Application	< > Or Assign Application
	APPLICATIONS				Select an Application to Edit or Assign users/groups to it
	Publish	Desktop, Taskbar, Floating Pa	nel and Application Panel	1	
	Users	Microsoft TSplus Remo		on Desktop folder	
₿	PRINTER	Remote Desktop Taskbar Published Applications	Panel		
O	WEB	Notepad Foxit	OpenOffice		
≣⊡	FARM				
ి	SESSIONS				
್ನ	SYSTEM TOOLS				
鐐	ADVANCED				
చి	ADD-ONS				
©7	LICENSE				

Click on the "Add Application" tile in order to publish an app:

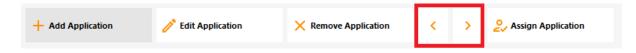
🕄 New Application	_		Х
Path/Filename:			
C:\Program Files (x86)\Foxit Software\Foxit Reader\FoxitReader.exe			Þ
Start Directory:			
C:\Program Files (x86)\Foxit Software\Foxit Reader			B
Display Name:			
Foxit Reader]
Command line option:			
]
Window State:			
Default (Maximized if single application on Web/Mobile client)		~	
Folder:			
(top-level)		~	•
Save Test	Can	cel	

- 1. Foxit is published as an example. To publish an application, click on the "Add application" button, then locate the path of the executable of your application by clicking on browse, then set a name for this application in the dedicated field.
- 2. You must click on the "Save" button to store any modification.
- 3. After declaring a new application, we recommend to use the "Test (start selected)" button to

check that the application is functional before assigning it to your users.

- 4. You can specify for each application if it will be **launched maximized, minimized, assigned** to all the users or if it will be hidden after launch.
- 5. You can add a **command line option** if you need to add some extra parameters which are usually set in the shortcut properties of the application.
- 6. Since TSplus 12.40 version, you can now **create a new folder in which you can publish your applications.** (See below for more information) By default, they are published on the top-level folder.

Note: You can change the orders of applications by clicking on the left or right arrows, next to the "Assign Application" button:



Managing Applications Folder using the Admin Tool

You can add, edit or remove Applications Folder on the same dashboard.

First by publishing an application, then by clicking on the "+" button at the bottom-right under the "Folder" selection:

👖 New Application	_		×
Path/Filename:			
C:\Program Files (x86)\Foxit Software\Foxit Reader\FoxitReader.exe			E
Start Directory:			
C:\Program Files (x86)\Foxit Software\Foxit Reader			B
Display Name:			
Foxit Reader]
Command line option:]
Window State:			·
Default (Maximized if single application on Web/Mobile client)		~]
Folder:			
(top-level)		~	\bigcirc
Save Test	Cano	el]

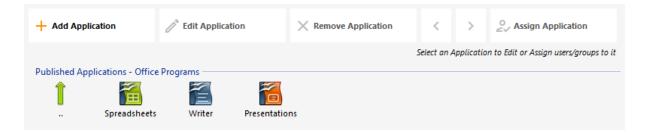
Then enter the name of your new folder:

- New Application	_			\times
Path/Filename:				
C:\Program Files (x86)\OpenOffice 4\program\scalc.exe				6
Start Directory:				
C:\Program Files (x86 👯 TSplus - New Folder	×			Þ
Display Name: Folder name: Spreadsheets (Please use only letters, digits, spaces, dots, hyphens and underscores) Command line optic Office Programs Window State: Office Programs Default (Maximized if Folder: Save Cancel				
(top-level)			\sim	\bigcirc
Save		Cancel		

The Folder then appears under your published Applications:

- 1 1 1	Splus - Administration Console	- 10 000 0					– 🗆 X
	TSPLUS	Remote Access Man	agement Console				
ŵ	HOME	+ Add Application	Edit Application	X Remove Application	<	>	Of Assign Application
	APPLICATIONS				Select an	Applicatio	on to Edit or Assign users/groups to it
	Publish	Desktop, Taskbar, Floating Par	el and Application Panel	*			
	Users	Microsoft TSplus Remot	e FloatingPanel Applicatio	n Desktop folder			
¢	PRINTER	Remote Desktop Taskbar Published Applications	Panel	n Desktop folder			
\odot	WEB						
₽	FARM	Notepad Office Program	15				
ి	SESSIONS						
e,	SYSTEM TOOLS						
鐐	ADVANCED						
చి	ADD-ONS						
©7	LICENSE						

Double-click on it to see, edit or remove each published application:



Each time you publish an application, you can select or create the folder in which it will be published:

🗃 Databases Settings —	×				
Path/Filename:					
C:\Program Files (x86)\OpenOffice 4\program\sbase.exe		>			
Start Directory:					
C:\Program Files (x86)\OpenOffice 4\program		>			
Display Name:					
Databases					
Command line option:					
Window State:					
Default (Maximized if single application on Web/Mobile client)	\sim				
Folder:					
Sales	~ 🕄				
(top-level) Office Programs					
Sales					
Web					

You can then assign the Folder to users or groups as an application, and publish it, like any application with the <u>TSplus Remote Taskbar</u>, the <u>The Floating Panel and Application Panel</u> or the <u>Web Portal</u>.

See this documentation for more information on applications assignments.

Important remarks

•

After installation, the default setting is: Any RDP user will see the complete Microsoft Remote Desktop.

•

The TSplus Taskbar publishes all shortcuts copied in the user's Desktop folder. When selecting TSplus Remote Taskbar, you can request to automatically copy any of the shortcuts

available in the All Users Desktop folder and/or, to automatically create shortcuts from applications assigned to the users with Application Control.

See this video on how to publish applications.

Assigning Applications to Users or Groups

Overview

Once you have <u>published some applications</u>, you can publish them to one or more users and/or groups. To do so, double-click on the application you wish to assign or click on the application, then on the "Assign Application" tile:

1 0 T	🎇 TSplus - Administration Console - 💶 👘 🦳 — 🗌 🗙					
	TSPLUS	Remote Access Mar	nagement Console			
ŵ	HOME	+ Add Application	🧪 Edit Application	X Remove Application	< > 2 Assign Application	1
	APPLICATIONS				Select an Application to Edit or Assign users/groups to i	t
	Publish Users	Desktop, Taskbar, Floating Pa	anel and Application Panel	1		
₽	PRINTER	Microsoft TSplus Remo Remote Desktop Taskbar Published Applications	ote FloatingPanel Applicat Pane			
Q	WEB	Notepad	OpenOffice			
≣∷	FARM	Hotepud Toxic	openomice			
۵	SESSIONS					
್ನ	SYSTEM TOOLS					
鐐	ADVANCED					
చి	ADD-ONS					
©7	LICENSE					

The following window will be displayed. It allows you to assign applications to a selected user or group:

TR T	Splus - Administration Console							-		×
		Remote Access Man	agement Console	2						
ŵ	НОМЕ	+ Add Application	/* Edit Application	× Remo	ve Application	< .	> <mark>2</mark> , A	ssign Applica	tion	
	APPLICATIONS				3	Select an Appli	ication to Edit	or Assign user:	/groups	to it
	Publish Users	Desktop, Taskbar, Floating Par		Dication Deskto	p folder					
¢	PRINTER	Remote Desktop Taskbar Published Applications		Panel	B Microsoft Rem		-		□ this	×
O	WEB	Notepad Foxit	OpenOffice		application: All authenticate					
∎∋	FARM				Specified users a Users and Groups					
å	SESSIONS				DESKTOP-SCVIIVH	John				
R	SYSTEM TOOLS									
ŝ	ADVANCED									
ది	ADD-ONS									
©7	LICENSE				Add	R	emove			
							Save	0	ancel	

How to Assign an Application to a user (or a group)

You can either assign an application for all authenticated users or to specified users and groups. If you wish to assign an application to a specific user or group, just click on "Add", then enter the name of the user or group you wish to assign the application: On this example, Foxit will be assigned to the Remote Desktop Users Group. Click on 'Ok":

🔓 номе	+ Add Application	Edit Application	× Remove Application	<	>	2. Assign	Application
				Select an	Applicatio	on to Edit or As	sign users/groups to
Publish	_	Panel and Application Panel					
Users							
	Microsoft TSplus Re Remote Desktop Taskba Published Applications		Panel Deskton folder Panel Select which user	133 47 11054770-115	s will be	able to see an	□ × nd run this
WEB	Notepad Foxit	OpenOffice	application: All authentica Specified user		16		
FARM	Notepau Poxi	Openomice	Select Users or Groups	, and group			3
SESSIONS			Select this object type:				
			Users or Groups				Object Types
SYSTEM TOOLS			From this location: DESKTOP-SCVIIVH				
ADVANCED			Enter the object names to select (avamplae)+			Locations
			Remote Desktop Users	examples),			Check Names
중 ADD-ONS			- 1.25y - 1.52				
			Advanced			ОК	Cancel

Then on Save:

🙆 Foxit User Assignme	ent	<u> </u>		×		
Select which users and groups will be able to see and run this application:						
All authenticated user	rs					
Specified users and g	roups					
Users and Groups						
DESKTOP-SCVIIVH\Remo	ote Desktop Users					
Add	Remove					
	Save		Cancel			

Manage applications per Users/Groups in bulk

The Applications - Users submenu allows you to see which applications are assigned per user or per group, by clicking on the "Select a User/Group" tile, then entering its name:

11 1	Splus - Administration Console	- 1994		- 🗆 🗙
	TSPLUS	Remote Access Management Console	e	
ŵ	НОМЕ	Select a User/Group		
	APPLICATIONS	Select a user/group to display and change applications assigned t Desktop, Taskbar, Floating Panel and Application Panel -	to it	
	Publish	🗌 🞯 Microsoft Remote Desktop	Select User or Group	×
	Users	TSplus Remote Taskbar FloatingPanel	Select this object type:	
a	PRINTER	Application Panel	User or Group	Object Types
-		Published Applications	From this location:	
O	WEB	Notepad	DESKTOP-SCVIIVH	Locations
₽	FARM	□ 🚱 Foxit □ 🚭 OpenOffice	Enter the object name to select (<u>examples</u>): Front Office	Check Names
8	SESSIONS		Advanced OK	Cancel
R	SYSTEM TOOLS		- Auvanceu	Cancer
鐐	ADVANCED			
చి	ADD-ONS			
©7	LICENSE			

On this example, you can see that the Microsoft Remote Dekstop, Notepad, Foxit and OpenOffice where all assigned to the group "Front Office":

TI T	Splus - Administration Conso	ble - Linita I		- 🗆 X
	TSPLUS	Remote Access Man	agement Console	
ŵ	HOME	Select a User/Group	Applications assigned to Group DESKTOP-SCVIIVH\Front Office	
	APPLICATIONS	Select a user/group to display and c		
	Publish	Desktop, Taskbar, Floating Par		
	Users	TSplus Remote Taskbar		
¢	PRINTER	Application Panel		
Q	WEB	Published Applications Image: Constraint of the second s		
₽	FARM			
8	SESSIONS			
R	SYSTEM TOOLS			
鐐	ADVANCED			
ස	ADD-ONS			
©7	LICENSE			

Important remarks when using TSplus Seamless Client

With the TSplus Seamless Client, the users will not display the Microsoft Remote Desktop windows. The applications can be found on the local desktop as if they were native local applications. Users will only see the applications assigned by the administrator.

• If a user has the right to use the default Microsoft Remote Desktop, the Seamless Client will

display a background color to avoid having both the Remote and the Local Desktop icons piled on the screen.

- The Seamless Client session is held open only when an application is running and being pushed through to the local client. If no application has been assigned to this user, TSplus will automatically use the TSplus Taskbar.
- If a user has specific applications assigned, they will seamlessly see these applications when the session is opened. When the last application is closed the session ends.

Rules for Microsoft Remote Desktop, TSplus Remote Taskbar, Floating Panel and Application Panel

- You can customize your user's work environment by assigning one application out of these four: Microsoft Remote Desktop, TSplus Remote TaskBar, Floating Panel and Application Panel.
- If no application is assigned to one user, he will see the Microsoft Remote Desktop which will display the Desktop folder shortcuts.
- If one user has several allocations plus the Microsoft Remote Desktop, he will see a remote desktop.
- If a user has several applications plus the TSplus TaskBar, he will see the TaskBar displaying his Desktop folder' shortcuts.

For more information on the Remote Taskbar, Floating and Application Panels, see these documentations: <u>Remote Taskbar</u>, <u>Floating and Application Panels</u>

Running scripts/programs on session opening

- If you want to start a script when the session opens, you must name it LOGON.BAT or LOGON.CMD and copy this script:
 - In the Application Data folder of All Users if this script applies to all users,
 - In the Application Data of the user if this script applies to this user.
- If you want to start a script on the client side when a session is opening, you just have to name a program STARTUP.EXE and to copy it at the home drive of the user PC (C:\startup.exe).
- If you want a program to be started as a service when the TSplus server reboots you have to name this program STARTUP.EXE and copy it in the folder: C:\Program Files\TSplus\UserDesktop\Files\.

See this video on how to Assign Applications.

Assigning Applications to Users with Azure Active Directory

Overview

To assign an Azure Active Directory user to an application from the AdminTool > Applications > Users :

Select a User,	/Group
Select a user/group t	o display and change applications assigned to it
Desktop, Taskbar	Floating Panel and Application Panel
Microsoft	Select a User/Group
TSplus Re FloatingP	Find local or Active Directory users or groups
Applicatic 🔁 🔁 🔁	
Published Appl	Or type directly the name of an Azure Active Directory user:
🗖 剩 Notepad	AzureAD\ThomasMontalcino
🗖 🛱 My Applic	
	Select user or group

Local or Active Directory users must be selected using the Find Local or Active Directory Users or Groups button. Only external users can be entered directly into the text box.

Built-in Web Server Management

Your Remote Desktop Server must be available, easy-to-access and safe. That's why TSplus utilizes a built-in Web Server which helps you easily manage its status and operations. A Management Console is available in the Administrator Tool. This Management Console enables you to view and configure the status of Terminal Service Plus built-in Web Server. When you <u>install TSplus</u>, web servers are listening on ports 80 and 443 by default. Make sure that the defined ports are available and that Java is installed on the server.

See the video about Web Features.

Web Server Components Status

The status of the Web Server main components are displayed on the AdminTool Home dashboard.

1 TSplus - Administration Console	I TSplus - Administration Console — 🗆 🗙						
TSPLUS	Remote Access Management Console						
Ф номе							
	Ţ	\bigcirc					
	Computer name: WIN-A1L00CN0E56	http://localhost					
S WEB	Private IP 192.168. Public IP 78.193. RDP port 3389 🧪	The built-in HTTP server is listening on port 80					
FARM	Connections: 1	The HTTPS server is listening on port 443					
SESSIONS	C Session Manager						
SYSTEM TOOLS	System Audit - No issues found on 1/7/2020 4:27:20 PM						
2023 ADVANCED	Version 12.60.1.4 - You are using the latest version	() Read changelog					
값 ADD-ONS	C License Activated - Enterprise edition - Unlimited users						
ලිසු LICENSE	End of support date: 7/11/2022						
	English •	(?) Help					

Ports Considerations (Local Machine and Firewall / Router)

Terminal Service Plus only requires either Port 80 or Port 443 to be opened. Port 3389 can stay

closed.

TSplus - Administration Console	1	– 🗆 X
TSPLUS	Remote Access Management Console	
Ф номе		
	\Box	\bigcirc
	Computer name: DESKTOP-SCVIIVH Private IP 192.168.1.22	http://localhost
S WEB	Public IP 78.	The built-in HTTP server is listening on port 80
FARM	Connections: 1 Q	The HTTPS server is listening on port 443
SESSIONS		
💐 SYSTEM TOOLS	System Audit - No issues found on	
없 advanced	Version - You are using the latest version	
쑸 ADD-ONS	License Activated - Enterprise edition - 25 users	
	Contract End of support date:	
	English •	Help

Restart / Stop the Web Server Service

If you see that a service is not running, you may need to restart the Web servers by clicking on the "Restart Web Servers button" which is represented by an arrow on the right, the Web Servers will be restarted and the service should be running again.

TSplus - Administration Const	ole	- 🗆 X
TSPLUS	Remote Access Management Console	
М номе		
	—	\bigcirc
	Computer name: DESKTOP-SCVIIVH Private IP 192.168.1.22	http://localhost
S WEB	Public IP 78. RDP port 3389 🧪	The built-in HTTP server is listening on port 80
FARM	Connections: 1 Q	The HTTPS server is listening on port 443
SYSTEM TOOLS	System Audit - No issues found on i	
	Version - You are using the latest version	
슈 ADD-ONS	O License Activated - Enterprise edition - 25 users	
	Send of support date:	
	English	🕜 Help

If you click on the "Stop Web Servers" button, placed on the middle, the Web servers will be stopped. The HTTP and HTTPS server status will now display in red indicating that the HTTP /

HTTPS services are stopped:

1 TSplus - Administration Console	2 2	– 🗆 X
TSPLUS	Remote Access Management Console	
М НОМЕ		
	\Box	\bigcirc
	Computer name: DESKTOP-SCVIIVH Private IP 192.168.1.165	http://localhost
S WEB	Public IP 78.	The built-in HTTP server is not listening on port 80
FARM	Connections: 1 Q	The HTTPS server is not listening on port 443
SYSTEM TOOLS	System Audit - No issues found on	
ស្ដែ advanced	Version 🔲 🖬 > You are using the latest version	
값 ADD-ONS	License Activated - Enterprise edition - 25 users	
ତଙ୍ଗ LICENSE	End of support date:	
	English	🕜 Help

Manage Web Servers

- ∏ ∦ T	Splus - Administration Cons	le – [×
	TSPLUS	Remote Access Management Console	
ŵ	НОМЕ	Default HTTP web server	
	APPLICATIONS	A built-in HTTP Web Server is provided with TSplus However, you can use a different one (IIS or Apache for example). Use the built-in HTTP web server	
¢	PRINTER	Use a different HTTP web server When using IIS or Apache, its HTTP port number must be set to 81. (Tunneling forwards this 81 port into the public HTTP port 80)	
Q	WEB		
	Web Portal	Change the Web Server root path	
	HTTPS	You can change the Web Server default root path. The current Web Server root path is: C:\Program Files (x86)\TSplus\Clients\www Select a new Web Server root path	
	Web Server	C: (Program Files (xoo)() spius (clients (www Select a new Web Select a new Select a new Web Select a new Select a new Select a new Web Select a new	
	Lockout		
₽	FARM	- Web servers options	
گ	SESSIONS	Change the HTTP/HTTPS port numbers Will not change IIS or Apache port settings	
e,	SYSTEM TOOLS	НТГР: 80 ÷ НТГР5: 443 ÷	
繱	ADVANCED		
చి	ADD-ONS	Save and Restart Web Server	
<u>_</u>	LICENSE	v	

You can change the ports during installation or at any time by clicking on the Web - Web Server tab. On this tab, you can choose to use a different HTTP web server, modify the Web Server root path and the HTTP/HTTPS port numbers. Make sure that these ports are available before changing them: if a conflict occur TSplus web server will not work.

<u>Here</u>

is a non-exhaustive list of TCP port that might be used by an application on your server. Once these modifications done, click on save and the AdminTool will restart.

###Disable http only or http on https

See this documentation for more information on this topic.

For more in-depth information about **servers customization** and **preferences**, see these pages:

Web Portal Preferences, Web Applications Portal, Web Credentials.

Choosing your Ciphers Suites to enhance security

Overview

TLS/SSL, the security behind HTTPS, can use several different algorithms to secure, encrypt and authenticate a connection.

The choice of the algorithm to use is decided by an agreement between the server and the client, depending on which algorithms are available on each side.

A cipher suite is a named combination of authentication, encryption, message authentication and key exchange algorithms.

Terminal Service Plus server can handle a lot of different ciphers suites. Some of them are more secure than others, but some old/legacy browsers might require relatively weak algorithms to connect.

This is the reason why Terminal Service Plus let you choose the ciphers suites you want to enable. Of course, Terminal Service Plus also has an easy setting to disable the weakest algorithms, thus enhancing your connections security.

HTTPS Protocols and Ciphers Selection

To see Terminal Service Plus Ciphers Selection, open Terminal Service Plus AdminTool, click on the "Web - HTTPS" tab, where you will see HTTPS Protocols and Ciphers:

TH T	Splus - Administration Console	•• • • • • • • • • • • • • • • • • • •	– 🗆 X
	TSPLUS	Remote Access Management Console	
	HOME APPLICATIONS PRINTER	Generate a free valid HTTPS certificate HTTPS Certificate Toolkit	
O	WEB		
	Web Portal	HTTPS Protocols and Ciphers Protocols	
	HTTPS		
	Web Server	Ciphers	
₽	FARM	SSL_DHE_DSS_WITH_3DES_EDE_CBC_SHA SSL_DHE_RSA_WITH_3DES_EDE_CBC_SHA SSL_RSA_WITH_3DES_EDE_CBC_SHA	
å	SESSIONS	SSL_RSA_WITH_RC4_128_MD5 SSL_RSA_WITH_RC4_128_SHA	
ą	SYSTEM TOOLS	TLS_DHE_DSS_WITH_AES_128_CBC_SHA TLS_DHE_DSS_WITH_AES_128_CBC_SHA256 TLS_DHE_DSS_WITH_AES_128_GCM_SHA256	
鐓	ADVANCED	☑ TLS_DHE_DSS_WITH_AES_256_CBC_SHA ☑ TLS_DHE_DSS_WITH_AES_256_CBC_SHA256	<u> </u>
ස	ADD-ONS	Disable weak parameters Save	
©7	LICENSE	<u>.</u>	

Enabling/Disabling a Cipher Suite

You can easily enable a cipher suite by checking its checkbox and disable a cipher suite by unchecking it.

When your selection is done, click on "Save".

This will save your selection and reload the new configuration in Terminal Service Plus built-in web server. Your new ciphers suites selection is instantly applied for every new connection to your server.

Recommended Ciphers Suites Selection

We recommend to most administrators to use our recommended ciphers suites selection, by simply clicking on the "Disable weak parameters" button and then on the "Save" button.

This action will disable all ciphers suites which are currently known to be weak.

You can check with <u>SSL Labs Online Testing Tool</u>: without those weak ciphers suites you should get the maximum grade: A!

Click-to-Help - Admin Tool - Addons

Click-to-Help - Admin Tool - Advanced

Click-to-Help - Admin Tool - Applications

Click-to-Help - Admin Tool - Farm

Click-to-Help - Admin Tool - License

Click-to-Help - Admin Tool - Printer

Click-to-Help - Admin Tool - Security

Click-to-Help - Admin Tool - Sessions

Click-to-Help - Admin Tool - System

Click-to-Help - Admin Tool - Web

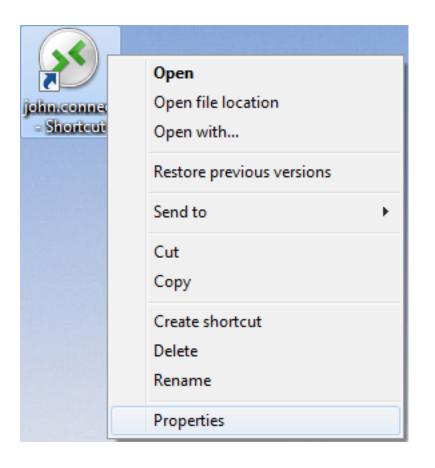
Click-to-Help - Admin Tool - Web

How to modify the TSplus client's icon

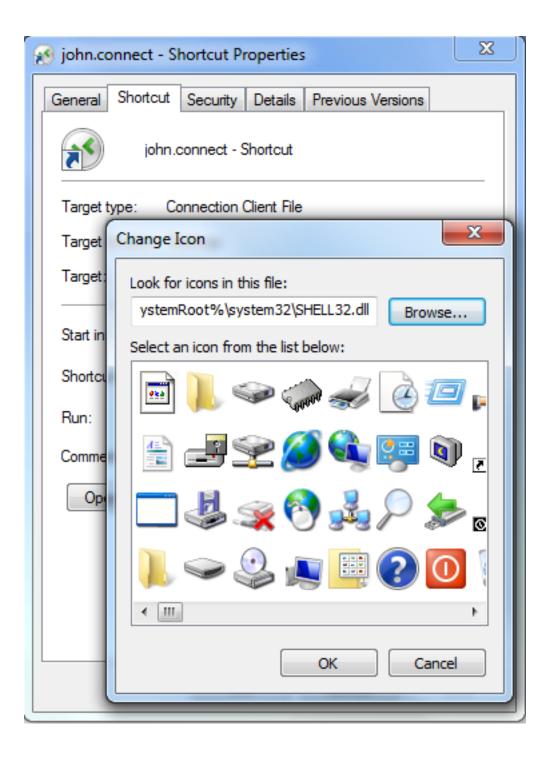
Change your client's icon

In order to change the generated client's icon, just create a shortcut of the client and go to the shortcut's properties:

~	
john.conne	Open Open with
	Share with Restore previous versions
	Send to +
	Cut Copy
	Create shortcut
	Delete
	Rename
	Properties



🔊 john.connect ·	- Shortcut Properties		
General Shortco	It Security Details Previous Versions		
joł	n.connect - Shortcut		
Target type:	Connection Client File		
Target location:	Desktop		
<u>T</u> arget:	rs\Administrator.admin-PC\Desktop\john.connect		
<u>S</u> tart in:	C:\Users\Administrator.admin-PC\Desktop		
Shortcut key:	Shortcut key: None		
<u>R</u> un:	Normal window -		
Comment:			
Open <u>Fi</u> le Lo	Change Icon Advanced		
	OK Cancel Apply		



TSplus Client Setup program

Installl

On client side, **each user will have to run a signed program named "Setup-ConnectionClient.exe" as a pre-requisite**.

This program is available on your server, in the TSplus program folder: C:\Program Files (x86)\TSplus\Clients\WindowsClient:

Correction of the second s	Clier	nts 🕨 WindowsClient 🕨	▼ 4 9 Se	earch WindowsClient	٩
Organize 👻 🖬 Open	1	New folder			= - ()
Nesktop	*	Name	Date modi.	Туре	Size
Downloads		\mu ico	6/15/2017	File folder	
Recent Places		ClientGenerator.bin	7/30/2018	BIN File	639 KB
📴 Libraries		OlientGenerator.exe	7/7/2017 1	Application	96 KB
Documents	=	Note: Setup-ConnectionClient.exe	7/30/2018	Application	9,389 KB
		🐼 svcr.exe	7/3/2017 1	Application	947 KB
Pictures					
Videos					
🖳 Computer					
🚮 Local Disk (C:)					
			III		•
Setup-Connect Application	ionCl	ient.exe Date modified: 7/30/2018 7:35 PM Size: 9.16 MB	Date create	d: 7/31/2018 7:55 PM	

It is also available in C:\Program Files (x86)\TSplus\Clients\www\ConnectionClient, so your users can just run the program once on your web server address: <u>http://xxxxxxxx/ConnectionClient/</u><u>Setup-ConnectionClient.exe</u>

ConnectionClient					- 0	×
\leftarrow \rightarrow \checkmark \uparrow \frown \checkmark TSplus \rightarrow Clients \Rightarrow	www	 ConnectionClient 	ٽ ~	Search Con	nectionClient	Q
🗸 🔄 Clients	^	Name	Date modified	Туре	Size	
> kebserver		network Setup-ConnectionClient	6/25/2019 10:03 AM	Application	6,040 KB	
> 📙 WindowsClient						
✓						
📙 cgi-bin						
GonnectionClient	~					
1 item						

Install for all users

You can now install the Connection Client for all users. This means that once installed, any user on the computer will benefit from it, and will be able to connect in remoteApp mode from the Web Portal, as well as with a generated .connect client file.

Select S	Setup Install Mode X
N	Select install mode
	Connection Client can be installed for you only, or for all users (requires administrative privileges).
	\rightarrow Install for me only (recommended)
	Install for all users
	Annuler

Note: For this pop-up to appear, you will need not to have the Connection Client installed already. You can also, during an installation using commandline, specify which mode you want to use with the argument /ALLUSERS or /CURRENTUSER to install respectively for all users, or for the current user.

Note: Since TSplus 12.40, The Client Setup Program and the <u>RemoteApp client setup</u> have been merged and can be deployed with one single setup - so if you download the Connection Client Setup, there will be no need to download the RemoteApp Client one.

How to completely customize the Web Access Page beyond the Web Portal capabilities?

Overview

By using the <u>Web Portal</u> you can customize Terminal Service Plus Web Access Pages in an extensive way.

However, in some cases, this is not enough. In these cases, you can completely customize the Web Access Page, beyond the Web Portal capabilities, by modifying by yourself the Web Access Page generated by the Webmaster Toolkit.

Warning, this documentation is intended only for skilled Web developers.

Generating mandatory settings

In order to include the mandatory settings in your Web Access page, we recommend that you start by generating your Web Access Page by using the <u>Web Portal</u>.

Files location

The Web Access Page will be generated in the "C:\Program Files (x86)\TSplus\Clients\www" folder, for instance if you choose "index" as the page name, it will be the file named "index.html" in this folder. It is a standard HTML file, so you can use all your knowledge of HTML, JavaScript and CSS programming languages to develop your custom page.

All the files inclusion are written relatively to the "C:\Program Files (x86)\TSplus\Clients\www" folder. For instance, the main CSS styles file is located at "C:\Program Files (x86)\TSplus\Clients\www\software\common.css", so it is included in the HTML Web Access Page file by the following line:

Minimal Web Access Page

Starting from an HTML file generated by the Web Portal Preferences, we will reduce it down to a minimal Web Access Page. We advise you to use a text editor such as Notepad or Notepad++ (do not use Word).

After our work, it will look like the screenshot below:

Log on	
	0.5
HTML5 client	RemoteApp

First, you must keep everything that is between the and HTML tags:

- meta tags to force browsers to clear their cache
- .js files inclusions
- JavaScript settings declarations

Then, you can reduce the content between the 'body' and '/body' HTML tags down to these few lines:

HTML5 client RemoteApp

Refresh the web page in your web browser, and you should get the minimal page of the above screenshot.

We recommend you clear your browser's cache after saving any changed file.

Finally, it is now up to you!

As long as you keep the calls to JavaScripts functions on specific events and the given identifiers (id="..."), your fully customized Web Access Page will be working fine!

Edit or Delete the Parameters of a Generated Client

There are many reasons why you would want to change the parameters of your connection client: your TSplus server IP address changed, you need to add printer's redirection, to change the universal printer settings or so on...

• You first need to create a shortcut of the ConnectLauncher.exe file, located on the RDP6 folder of the user's profile:

Organize 🔻 🛛 🔭 Op	en Include in library 🔻 Share with 👻	New folder	:= 🗸 🔟 🤇
☆ Favorites	Name	Date modified	Type Size
🧮 Desktop	📗 AppData	3/14/2017 3:17 PM	File folder
〕 Downloads	🌗 applist	12/6/2017 12:29 PM	File folder
🕮 Recent Places	📙 Contacts	3/14/2017 3:33 PM	File folder
	膧 Desktop	7/3/2017 10:41 PM	File folder
🥽 Libraries	间 Downloads	3/14/2017 3:33 PM	File folder
Documents	📡 Favorites	3/14/2017 3:33 PM	File folder
J Music	🗽 Links	3/14/2017 3:33 PM	File folder
Pictures	My Documents	3/14/2017 3:33 PM	File folder
📑 Videos	🔰 My Music	3/14/2017 3:33 PM	File folder
_	My Pictures	3/14/2017 3:33 PM	File folder
Computer	🔰 My Videos	3/14/2017 3:33 PM	File folder
🚮 Local Disk (C:)	J RDP6	8/1/2018 12:23 PM	File folder
	B Saved Games	3/14/2017 3:33 PM	File folder
📬 Network) Searches	3/14/2017 3:33 PM	File folder

G 🕞 🗢 📕 🕨 Compu	ıter → Local Disk (C:) → Users → john → RD	P6 👻 🍫	Search RDP6		۶
Organize 🔻 🔳 Ope	en Share with 🔻 New folder			!≡ ▼ 🚺	?
🔆 Favorites	Name	Date modified	Туре	Size	ſ
Nesktop	😹 bkgsc.bmp	4/2/2016 10:16 AM	Bitmap image	8 KB	
🐌 Downloads	s. s. bkgscblue.bmp	4/2/2016 10:16 AM	Bitmap image	8 KB	
📃 Recent Places	s bkgscgreen.bmp	4/2/2016 10:16 AM	Bitmap image	8 KB	
	🛃 bkgscpink.bmp	4/2/2016 10:16 AM	Bitmap image	8 KB	
ز Libraries	ConnectionClient.bin	7/30/2018 7:35 PM	BIN File	570 KB	
Documents	SonnectionClient.exe	7/7/2017 10:19 AM	Application	96 KB	
🚽 Music	SonnectionClientold.exe	7/7/2017 10:19 AM	Application	96 KB	
Pictures	ConnectLauncher.bin	7/30/2018 7:35 PM	BIN File	8,188 KB	
📑 Videos	🐼 ConnectLauncher.exe	7/8/2018 9:04 PM	Application	96 KB	
	🔝 ConnectLauncher.exe - Shortcut	8/1/2018 12:13 PM	Shortcut	2 KB	
👰 Computer	DroidSansFallback.ttf	4/2/2016 6:13 AM	TrueType font file	3,749 KB	
🚮 Local Disk (C:)	🎭 ico2.ico	4/2/2016 10:16 AM	Icon	161 KB	
	🐼 icon.ico	4/2/2016 10:16 AM	Icon	54 KB	
🗣 Network	📄 languk.ini	3/25/2017 8:27 AM	Configuration sett	7 KB	
	🚳 libmupdf.dll	8/14/2016 5:36 AM	Application extens	5,095 KB	
	MyRemoteApp.bin	7/30/2018 7:35 PM	BIN File	6 KB	
	🐼 MyRemoteApp.exe	7/7/2017 10:19 AM	Application	96 KB	
	MyRemoteApp.ini	8/1/2018 12:09 PM	Configuration sett	1 KB	
ConnectLaur Shortcut	ncher.exe - Shortcut Date modified: 8/1/2018 Size: 1.09 KB	12:13 PM Date crea	ted: 8/1/2018 12:15 PM		

.

 Then, right click on it and hit properties. Place your mouse at the end of the "target" field and type in the client's path followed by "/?", for example: "C: \Users\John\Desktop\clientname.connect /?":

C	Details	Dente	
Security	Details Shortcut		s Versions
General	Shortcut	Co	mpatibility
S Ca	onnectLauncher - Sho	ortcut	
Target type:	Application		
Target location:	RDP6		
<u>T</u> arget:	her.exe C:\Users\J	ohn\Desktop\joh	n.connect /?
<u>S</u> tart in:	C:\Users\John\RD	P6	
Shortcut key:	None		
<u>R</u> un:	Normal window		~
Comment:			
Open <u>F</u> ile L	ocation <u>C</u> hange	e Icon A	<u>d</u> vanced

Now click OK and double click on the shortcut. A list of switch appears :

Remote Desktop possible parameters	х
/clean : to reset user workstation parameters Connection settings -user: user logon -psw: user password -server: server IP adress -port: RDP port number (3389) -domain: Domain name Display settings -color: Enter 8, 15, 16 or 24 (bits) -full: 2 for full screen, else enter 1 -width: enter 800, 1024 or 1280 -height: enter 600, 768 or 1024 -remoteapp: on/off to do Microsoft RemoteApp -seamless: on/off to do seamless Remote Application -dualscreen: on/off to use a dual screen	
-alttab: 0/1 - 0 means Alt-Tab on the client side -localtb: 0 or 42 - 0 means RDP will cover the local taskbar -apppath: path of a specific RemoteApp	
Local drives settings -disk: on/off Disks -printer: on/off Printers -com: on/off COM ports -smartcard: on/off Smart cards	
Universal Printer settings -preview: on/off Preview the prints on the local PC -select: on/off Select a local printer -default: on/off Print on the default local printer	
-defaultsystem: on/off Print on the default local printer with the system defined PDF reader	
Security settings -lock: lock the program on the workstation name -serial: lock the program on the device serial number -gatewayhostname: RD Gateway hostname -gatewayusagemethod: RD Gateway usage method	
ОК	

Click OK, the list of all the parameters appears in a small window. You can now edit them to match your preferences, you will need to log off and log on again to apply the changes.

🐼 Changing the conne	ection settings of this l	o	_		\times
To modify the local conne just replace the current or					
altb 42 full 2 -remoteapp	off -seamless off -width 1	1024 -h	eight 768	3 -smartsi	zing ()
ОК			Cancel		
Settings change $~~ imes~$					
Change saved					
OK					

Clean the Parameters of a Generated Client

After having launched the client at least once, you can clean the parameters by deleting the client.txt file located in the RDP6 folder:

	View			~
• 🔿 * 🛧 📙 > Thi	s PC > Local Disk (C:) > Users > John >	RDP6 v	ට Search RDP6	Q
Videos ^	Name	Date modified	Туре	Size
🏪 Local Disk (C:)	🖻 bkgsc	9/20/2018 2:21 PM	BMP File	8 KB
PerfLogs	📓 bkgscblue	9/20/2018 2:21 PM	BMP File	8 KB
Program Files	📓 bkgscgreen	9/20/2018 2:21 PM	BMP File	8 KB
Program Files	📓 bkgscpink	9/20/2018 2:21 PM	BMP File	8 KB
tmp	ConnectionClient.bin	11/14/2018 10:49	BIN File	580 KB
Users	🔗 ConnectLauncher - Shortcut	11/29/2018 2:17 PM	Shortcut	2 KB
_	ConnectLauncher.bin	11/14/2018 10:49	BIN File	8,253 KB
admin	SonnectLauncher	9/20/2018 2:21 PM	Application	96 KB
Default.mig	DroidSansFallback	9/20/2018 2:21 PM	TrueType font file	3,749 KB
John	nico2	9/20/2018 2:21 PM	lcon	161 KB
Contacts	📄 john	11/29/2018 2:14 PM	Text Document	1 KB
Desktop	🔊 languk	9/20/2018 2:21 PM	Configuration sett	7 KB
7 items 1 item selected		0.000.0040.0.04.014	a 15 15 1	

Enforce HTTPS protocol

Standard Case

Starting from Terminal Service Plus version 9.20, you can redirect every web request which uses HTTP to the HTTPS secure protocol.

To activate this feature on a server, edit (or create) the file "C:\Program Files (x86)\TSplus\Clients\webserver\settings.bin" and add the following line:

disable_http_only=true

Save the file and restart Terminal Service Plus web servers (AdminTool > Web > Restart Web Servers or reread configuration by accessing <u>http://127.0.0.1/w0j3?settings.bin</u>).

Once this feature is enabled, you can try to browse to the insecure web page at:

http://your-server

and it will automatically redirect your request to the secure Web Portal page at:

https://your-server

Special case: Custom Web Ports

If you are using a specific port to serve HTTPS, then edit the file "C:\Program Files (x86)\TSplus\Clients\webserver\settings.bin" and use the following line instead of the line described above:

disable_http_only="domain.com:4431"

where domain.com is your own server host name and 4431 is your HTTPS custom port.

Save the file and restart Terminal Service Plus web servers (AdminTool > Web > Restart Web Servers).

Once this feature is enabled, you can try to browse to the insecure web page at:

http://domain.com

and it will automatically redirect your request to the secure Web Portal page at:

https://domain.com:4431

Comment: Even if this is not secure but you wish to disable ssl/https on http port then edit the settings.bin file and add: disable_ssl_on_http=true, save and restart the servers.

Disable http on https

By default it is allowed to access <u>https://my-domain.com</u>, <u>https://my-domain.com:80</u>, <u>http://my-domain.com:443</u> So it allows http on port 443 or allow https on port 80, it does not have impact on security and makes it easy to fallback to degraded xhr-connection when no websockets support is possible But if wished to disable it, edit the settings.bin file and add the following line:

disable_http_on_https=true

Then restart Terminal Service Plus web servers (AdminTool > Web > Restart Web Servers or reread configuration <u>http://127.0.0.1/w0j3?settings.bin</u>)

HTTPS Enforcement and Free SSL Certificate Validation

Please note that this HTTPS Enforcement feature is fully compatible with our <u>Free SSL</u> <u>Certificate</u> feature.

Enforce the use of web portal to connect to the server

Starting from Terminal Service Plus version 6.60, you can block/disable any attempt to connect using mstsc.exe (or any RDP clients) over the open/redirected port (80 or 443).

This feature only allows accesses from the Terminal Service Plus Web Portal and disables any other RDP connection on port 80/443.

To activate this feature on a server, edit the file C:\Program Files (x86)\TSplus\UserDesktop\files\AppControl.ini and add/modify the following variable:

[Security] Block_rdp_splitter=yes

Error

This page does not exists.

Return to the home page

Farm Manager

Overview

The Farm Manager is Terminal Service Plus centralized farm administration user interface.

The Farm Manager goal is that the Administrator will be able to administer all his Terminal Service Plus servers from a centralized location, namely the Farm Manager application running on the Farm Controller server.

To run the Farm Manager application, open an Administrator session **on the server which will become the Farm Controller**, then Open Terminal Service Plus AdminTool, click on the "Farm" tab, then on "Farm Manager" as shown below:

TR T	Splus - Administration Consc	ile - 11 11 11 - -	Х
	TSPLUS	Remote Access Management Console	
俞	НОМЕ	^	
	APPLICATIONS	Farm Manager	
¢	PRINTER	Local Server's Key CiklyZ	
0	WEB	On your Farm Controller, open Farm Manager and copy/paste this key to add the current server to your Farm.	
≣⊡	FARM		
	Manage		
	Reverse-Proxy		
	Load Balancing		
	Assigned Servers		
8	SESSIONS		
ą	SYSTEM TOOLS		
礅	ADVANCED		
ස	ADD-ONS		
©7	LICENSE	•	

Servers

The "Servers" tab is displayed by default when launching the Farm Manager:

🍄 Farm Manag	er						- 🗆	×
		ers Sessi	ons					
Connect to Se	erver 🕕 🕕 Detail	s 🕒 Add 😢	Remove 🛄 Er	able 🧓 Disable	🕏 Refresh			
APP-SERVER-1	APP-SERVER-2	APP-SERVER-3	APP-SERVER-4	APP-SERVER-5	APP-SERVER-6	APP-SERVER-7	APP-SERVER-	8
				tion Comu				

In this tab, you can see the list of Application Servers in the Farm, add a new Application Server to the Farm

and perform several actions on an Application Server by selecting it and clicking on one of the following buttons:

- "Connect to Server": open the default RDP client and connect automatically to the selected server. If your credentials are saved in MSTSC they will be used, otherwise you will have to enter your credentials.
- "Details": show a window with the selected server details: name, hostname, ports, versions.
- "Remove": permanently remove the selected server from the farm (you can still add it again later with the "Add" button).
- "Enable": set the state of the selected server to "Active" (this is the default state).
- "Disable": set the state of the selected server to "Disable" (this state will be used later for Load-Balancing feature and users-draining use cases).
- "Refresh": perform a full refresh of the list of Application Servers.

Sessions

Click on the "Sessions" menu to display the following tab:

💮 Farm Manager							- 🗆	×
TSPLUS	Serve	ers Ses	iions					
🔜 Connect to Server 🛛 🛓	🗖 Disco	nnect <u>¶</u> Logo	off 🛛 🔤 Send Messa	ge 🔍 View 🛛	🛓 Control 👻	👶 Refresh		
Fam		User	Domain	Status	Session	Client Name	Client Address	s
APP-SERVER-1 APP-SERVER-2 APP-SERVER-3 APP-SERVER-4 APP-SERVER-6 APP-SERVER-7 APP-SERVER-7 APP-SERVER-8		adrienc		Active	Session#0	PEVERELL	192.168.0.13	

In this tab, you can see the list of User Sessions on any Application Server of the Farm, connect to the selected Application Server and perform several actions on one or several User Session(s) by selecting it/them and clicking on one of the following buttons:

- "Disconnect": disconnect the selected user session(s) (the user will still be able to connect back to his session).
- "Logoff": log off the selected user session(s) (every unsaved modification will be lost, applications will be shut down abruptly).
- "Send Message": display a window to enter a title and a text, then send this message to the selected user session(s).
- "View": View a selected user session.
- "Control": Remotely control a selected user session.
- "Refresh": perform a full refresh of the list of user sessions for the selected server.

The list of User Sessions is automatically refreshed every 5 seconds. This automatic refresh stops if the selected server becomes unavailable. A click on the "Refresh" button will resume the automatic refresh.

Settings

Click on the "Settings" menu to display the following tab:

💮 Farm Manager		-	×
TSPLUS Servers	Sessions Settings		
🖉 Edit 🐼 Apply all			
Settings Product Security Session Floating Panel Floating Panel Messages Remote App Client HTML5 Client	Name AdminTool background color AdminTool Language Visual Effect	Value Not Configured Not Configured	

Using this Farm Manager feature, you can configure all the Application Servers in your Farm from a centralized location.

In this tab, you can see the list of all the settings which can be managed at the Farm level.

To edit a setting, either click on it in the settings list and click on the "Edit..." button or just double-click on the setting. The following window will be displayed:

💮 AdminTool Language	×
AdminTool Language	
Description:	
Set the Admin Tool interface language.	
Value:	
O Not Configured	
Onfigured:	
English	\sim
Save Cancel	

If you want to apply this setting to all the Application Servers in your Farm, click on "Configured" and choose a value.

If you do not want to set this setting at the Farm level, click on "Not Configured". In this case, the existing values will not be changed on the Application Servers.

Once you have set all the settings you wanted to change, click on "Apply all..." to apply all your configured settings on your Farm's servers. The following window will be displayed:

Apply Settings	×
Please select the servers on which you want to apply a Farm-configured settings:	all the
 ✓ Fam Controller ✓ APP-SERVER-1 ✓ APP-SERVER-2 ✓ APP-SERVER-3 ✓ APP-SERVER-5 ✓ APP-SERVER-6 ✓ APP-SERVER-7 ✓ APP-SERVER-8 	
ОК	Cancel

Check all the servers on which you want to apply your configured settings, then click on "OK". The following window will be displayed, allowing you to monitor the task progress:

n Apply Settings	×
Applying all Farm-configured settings to the selected servers Iocal' server: applying settings Success!	
'APP-SERVER-1' server: applying settings Success! 'APP-SERVER-2' server: applying settings Success! 'APP-SERVER-3' server: applying settings Success! 'APP-SERVER-4' server: applying settings Success! 'APP-SERVER-5' server: applying settings Success! 'APP-SERVER-6' server: applying settings Success!	
'APP-SERVER-7' server: applying settings Success! 'APP-SERVER-8' server: applying settings Success!	
ок	

All the settings marked as "Configured" have now been updated on all the selected Servers.

Load-Balancing

Click on the "Load-Balancing" menu to display the following tab:

	Servers	Session	s S	Settings	Load-Bala	ncing		
				2		-		
Connect to Server	👶 Refresh							
Name	Hostname	Status	Enabled	Users	CPU (%)	Memory (%)	I/O (%)	
APP-SERVER-1	demo.tsplus.net	Up	Yes	0	2	26	0	
APP-SERVER-2	demo.tsplus.net	Up	Yes	0	2	26	0	
APP-SERVER-3	demo.tsplus.net	Up	Yes	0	0	26	0	
APP-SERVER-4	demo.tsplus.net	Up	Yes	0	2	26	0	
APP-SERVER-5	demo.tsplus.net	Up	Yes	0	2	26	0	
APP-SERVER-6	demo.tsplus.net	Up	Yes	0	0	26	0	
APP-SERVER-7	demo.tsplus.net	Up	Yes	0	4	26	0	
APP-SERVER-8	demo.tsplus.net	Up	No	0	2	26	0	

In this tab, you can see the list of Load-Balanced Servers Status and perform several actions on an Application Server by selecting it and clicking on one of the following buttons:

- "Connect to Server": open the default RDP client and connect automatically to the selected server. If your credentials are saved in MSTSC they will be used, otherwise you will have to enter your credentials.
- "Refresh": perform a full refresh of the list of load-balanced servers status.

The list of Load-Balanced Servers Status is automatically refreshed every 5 seconds. This automatic refresh stops if the connection becomes unavailable. A click on the "Refresh" button will resume the automatic refresh.

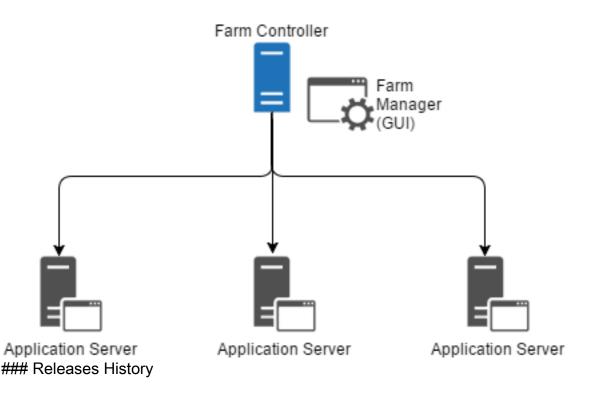
Farm Overview

Naming

The goal of TSplus Farm features is to allow the Administrator to manage all his TSPlus servers from a single server. This server is named the **Farm Controller**.

The TSplus servers in the Farm are named the Application Servers, or just Servers.

Finally, the application which allows the Administrator to manage and monitor his Farm is named the **Farm Manager**.



- API 1.4 (released with TSplus 10.10)
 - Load-Balancing centralized monitoring
 - Enable/Disable a Server in TSplus Load-Balancing Manager
 - Translations in multiple languages (TSplus language will be used)
 - Several settings added + display bugs fixed
- API 1.3 (released with TSplus 9.70)
 - Settings centralized monitoring and management (Global settings / Floating Panel /

RemoteApp Client / HTML5 Client)

- API 1.2 (released with TSplus 9.60)
 - Farm Manager
 - Servers centralized management (add/remove)
 - Sessions centralized monitoring and management (messages/disconnect/logoff)
- API 1.1 (released with TSplus 9.30)
 - Load-Balancing internals
 - Load-Balancing Sticky-Sessions

Farm Prerequisites

Hardware Requirements

Farm Controller and Application Servers have the standard <u>Terminal Service Plus requirements</u> for hardware.

Operating System Requirements

Farm Controller and Application Servers must use one of the following Operating System:

- Windows 7
- Windows Server 2008 R2
- Windows 8
- Windows Server 2012
- Windows 8.1
- Windows Server 2012 R2
- Windows 10 Pro
- Windows Server 2016
- Windows Server 2019

32 and 64-bit platforms are supported.

Network Requirements

Every Application Server must be accessible from the Farm Controller.

More specifically, the Farm Controller will issue requests to every Application Server on its API port (19955 by default) and this port must be opened on any firewall standing between the Farm Controller and Application Servers.

The network latency must be low between the Farm Controller and Application Servers. A latency under 200 ms is recommended, a latency under 2 000 ms is required.

Software Requirements

.NET 2.0 or higher is required - this should not be a problem as a compatible .NET version is enabled by default on every Operating System supported for Terminal Service Plus Farm.

Terminal Service Plus License and Version Requirements

Terminal Service Plus must be in "Enterprise" edition on the Farm Controller and on all the Application Servers.

All the servers must also run the same version of Terminal Service Plus.

Configuration Requirements

Farm Controller and Application Servers must have the same date/time configured. It is highly recommended to synchronize the Windows clock of all servers with an Internet Time Server if not already done.

Users Requirements

An Active Directory is **not** required, however if you do have an Active Directory, then your Domain Administrators must also be Local Administrators of the Farm Controller to be able to use Terminal Service Plus Farm Manager.

Farm Setup

Promoting a Server to Farm Controller role

Open an Administrator session **on the server which will become the Farm Controller** (usually this is the "Gateway" server).

Open Terminal Service Plus AdminTool, click on the "Gateway" tab, then on "Farm Manager" as shown below:

THT	Splus - Administration Consol	e-11.11.11.11 -	×
	TSPLUS	Remote Access Management Console	
ŵ	НОМЕ	^	
	APPLICATIONS	Farm Manager	
æ	PRINTER	Local Server's Key CiklyZ	
0	WEB	On your Farm Controller, open Farm Manager and copy/paste this key to add the current server to your Farm.	
≣⊡	FARM		
	Manage		
	Reverse-Proxy		
	Load Balancing		
	Assigned Servers		
8	SESSIONS		
ą	SYSTEM TOOLS		
礅	ADVANCED		
ස	ADD-ONS		
©7	LICENSE	v	

The following dialog box will be displayed:

CONTROLLER	x
This server is not a Farm Controller. Do you want to promote this server to Farm (Controller?
<u>Y</u> es <u>N</u> o	Cancel

Click on "Yes" to promote the current Server: it will become the Controller of your Farm.

Next, the <u>Farm Manager</u> main window will be displayed: this is the Farm Manager, the centralized farm administration user interface.

Adding an Application Server to the Farm

Once there is a Farm Controller, you can add Application Servers to the Farm.

To do so, open an Administrator session **on the Application Server** you want to add to the Farm.

This is the server's "Key". This Key is the "password" of your server for every Terminal Service Plus farm related features. Treat this Key as a password: do not communicate it to anyone, do not display it publicly.

ТЯТ	Splus - Administration Con	sole - 🗌 🕹 X
	TSPLUS	Remote Access Management Console
俞	HOME	^
	APPLICATIONS	Farm Manager
¢	PRINTER	Local Server's Key CiklyZ
O	WEB	On your Farm Controller, open Farm Manager and copy/paste this key to add the current server to your Farm.
≣∷	FARM	
	Manage	
	Reverse-Proxy	
	Load Balancing	
	Assigned Servers	
8	SESSIONS	
ą	SYSTEM TOOLS	
钧	ADVANCED	
ది	ADD-ONS	
©7	LICENSE	×

Now open an Administrator session on the Farm Controller and open the Farm Manager on it:

Farm Manager					
TSPLUS	Servers	Sessions	Settings	Load-Balancing	
Connect to Server	Details 🔁 Add	🙁 Remove 💋 Re	efresh		

On the default "Servers" tab, click on the "Add" button. The following window will be displayed:

Add a new Application Server	×
Name:	
APP-SERVER-1	
Hostname:	
app-srv-1.example.org	
Key:	
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
Port:	
19955	
Save Cancel	

Enter the Application Server details, as well as the Key you retrieved just before, then click on

the "Save" button to add the Application Server to the Farm.

Fast and easy File Transfer between the User and the Server

Overview

TSplus includes a unique method of transferring files:

- from the local user workstation => to the user Remote Desktop
- from the TSplus server => to the local user Desktop

Because the file transfers are based on a Virtual Channel, it is a lot faster than a file copy, and it can be done **even when the local user disk drives are not mapped**.

FileTransfer program and Generated Clients

The File Transfer program is located in your TSplus program folder, under the name "FileTransfer.exe" into the following path: "UserDesktop\files"

🖉 🗢 🔰 « Program	n Files (x86) → TSplus → UserDesktop →	files ▶ ▼ √y	Search files		
Drganize 🔻 🛛 🖬 Ope	n New folder			•	
🔶 Favorites	Name	Date modified	Туре	Size	
Desktop	airection.jpg	4/2/2010 10:10 AIVI	JPEG Image	2 KB	
Downloads	Documentation.chm	3/10/2017 10:13 PM	Compiled HTML	11,421 KB	
	🕐 exit.ico	11/13/2016 9:05 AM	Icon	32 KB	
E Recent Places	🕀 FarmManager.exe	6/12/2018 10:54 PM	Application	338 KB	
=	🖬 FarmManager.exe.config	10/11/2016 9:50 AM	XML Configuratio	1 KB	
🔰 Libraries	🔲 fileacl.exe	4/2/2016 10:16 AM	Application	92 KB	
Documents	FileTransfer.bin	6/12/2018 10:52 PM	BIN File	698 KB	
J Music	FileTransfer.exe	7/7/2017 10:19 AM	Application	96 KB	
Pictures	floating_panel_16.ico	4/2/2016 10:16 AM	Icon	2 KB	
🛃 Videos	floatingpanel.bin	6/12/2018 10:51 PM	BIN File	229 KB	
	Iloatingpanel.exe	7/7/2017 10:19 AM	Application	96 KB	
Computer	folder.bin	6/12/2018 10:53 PM	BIN File	293 KB	
🚮 Local Disk (C:)	📁 folder.exe	7/7/2017 10:19 AM	Application	198 KB	
FileTransfer.e	exe Date modified: 7/7/2017 10:19 AM	Date created: 3/16/2017 6:42		190 KB	

Transferring files

Transferring files is very easy.

First, launch the File Transfer (for instance by using TSplus Floating Panel):

Remote App	
FoxitReader	
Desktop folder	
File Transfer	
Excel	
Logoff	

Then navigate to your file using the folders tree:

- server's folders and files are on the left part of the window (server side)
- local workstation's folders and files are on the right part of the window (client side)

File Transfer						_ ×
Server side: C:\Users\admin\Desktop			Go Client side: C:\Users\Public\Pictu	ures\Sample Pictures		Go
⊕– — Desktop			product john john Public Documents Downloads Pictures Pictures Pictures Pictures Pictures			A E
Name	Size	Modified	Name	Size	Modified	
■a-1.exe	2.66 MB	2015/01/28 17:05:02	Chrysanthemum.jpg	858.78 KB	2009/07/14 05:52:25	
Admin Tool .Ink	1.22 KB	2015/01/28 14:42:48	E Desert.jpg	826.11 KB	2009/07/14 05:52:25	
Portable Client Generator.Ink	1.28 KB	2015/01/28 14:42:49	🔛 Hydrangeas.jpg	581.33 KB	2009/07/14 05:52:25	
			🔛 Jellyfish.jpg	757.52 KB	2009/07/14 05:52:25	
			🔛 Koala jpg	762.53 KB	2009/07/14 05:52:25	
			🔛 Lighthouse jpg	548.12 KB	2009/07/14 05:52:25	
			Penguins.jpg	759.6 KB	2009/07/14 05:52:25	
			Tulips.jpg	606.34 KB	2009/07/14 05:52:25	

Finally, right click on the file that you want to transfer to the other side, and click on "Send to server" (or "Send to client"):

 Pictures Sample Pictures ⊕, C Sample Pictures ⊕, C Recorded TV ⊕, C Videos 					
Name	Size	Modified			
🛅 []					
💼 Chrysanthemum. 📻	050 70 MD	2999/07/14 07:32:31			
Desert.jpg	Send to serve	[#] 19/07/14 07:32:31			
🛐 Hydrangeas.jpg	Rename	9/07/14 07:32:31			
💼 Jellyfish.jpg	Remove	9/07/14 07:32:31			
🔝 Koala.jpg 👘 👘	762.53 KB	2009/07/14 07:32:31			
💼 Lighthouse.jpg	548.12 KB	2009/07/14 07:32:31			
💼 Penguins.jpg	759.6 KB	2009/07/14 07:32:31			
💼 Tulips.jpg	606.34 KB	2009/07/14 07:32:31			

File Transfer works from the local workstation to the server, as well as the other way around (from the server to the local workstation).

Note: When using the file transfer utility from an HTML5 session, you will be able to transfer your files from server to client only. Please prefer the <u>HTML5 Top Menu method</u>, where you can upload files to the server, download to client and manage your file transfer listing.

Floating Panel and Application Panel

You can choose to enable the Floating or the Application Panel for your users or groups. These two ways of publishing applications are available for any connection method.

###Floating Panel

If activated with the assigned applications, you can see on the middle-left of the user screen the mini drop-down list of applications or floating panel (very much appreciated by TSplus users):

Assign it as an application:

👖 TSplus - Administration Console	e					– 🗆 X
TSPLUS	Remote Access Mar	nagement Console				
п номе	+ Add Application	🧪 Edit Application	X Remove Application	<	>	Sign Application
	Desktop, Taskbar, Floating Pa	and and Application Danol		Select an	Applicatio	on to Edit or Assign users/groups to it
S WEB	Microsoft TSplus Remo Remote Desktop Taskbar	ote FloatingPanel Applic Pan		el User Assi	gnment	- 🗆 ×
FARM	Published Applications	9	application:		os will be	able to see and run this
	Notepad Foxit	OpenOffice	 All authenticat Specified user 	s and group	DS	
SYSTEM TOOLS			Users and Group)esktop L	Jsers
ADVANCED						
값 ADD-ONS						
			Add		Remov	e
					Sav	ve Cancel

Select the Floating Panel, then click on the "Edit Application" tile you to customize the Floating Panel at your convenience:

- 1 0 T	Splus - Administration Console				- 0	\times
		Remote Access Mana	agement Con	sole	Floating/Folder Panel • Roating Panel preference Ploating Panel	
ŵ	НОМЕ	+ Add Application	🧪 Edit Applicatio	n	Remote App Your session name is:	
	APPLICATIONS				You are not allowed to start any Remote Application so far Please contact your administrator	s to it
	Publish	Desktop, Taskbar, Floating Pan	el and Application Pa	inel	Remote Applications	
	1 donan				To remotely start one application	
	Users	Microsoft TSplus Remote	FloatingPanel	Application	just click on its icon or click on its button	
д	00111750	Remote Desktop Taskbar		Panel	Logoff	
ð	PRINTER	Published Applications			You are connected to:	
O	WEB			-	Would you like to logoff now?	
		Office Programs Sales	Web	Products	Small size: Only Icons and Application Names	
Ð	FARM				Do not switch to Small Size (Only Icons) over 8 applications	
°	SESSIONS				Customize the Floating Panel logo	
					Do not display the Floating Panel Logo	
হ	SYSTEM TOOLS				Select your own logo (.bmp, 122x74 pixels) Select Reset logo	
1	STOTEM TOOLS				With or without Slider on the top right side	
කි	ADVANCED				Display the Slider Hide the Slider	
~~					With or without Minimize/Close buttons O Display Minimize/Close	
ది	ADD-ONS				With or without log off button	
ŝ					Display log off button Hide log off button	
ଙ୍କ	LICENSE				Background color: 0xFFFFFF Select Preview	
					Text color: Cx000080 Select Save	

Toating Panel	
Remote App	
Your session name is	
You are not allowed t	to start any Remote Application so far
Please contact your a	administrator
Remote Applications	
To remotely start one	application
just click on its icon o	or click on its button
Logoff	
You are connected to	D:
Would you like to log	off now?
O Do not switch to S iustomize the Floating	Small Size (Only Icons) over 8 applications Panel logo
_	
Do not display the	Floating Panel Logo
	Floating Panel Logo go (.bmp, 122x74 pixels) Select Reset logo
Select your own lo	go (.bmp, 122x74 pixels) Select Reset logo
Select your own lo Vith or without Slider o	go (.bmp, 122x74 pixels) Select Reset logo on the top right side Slider O Hide the Slider
Select your own lo Vith or without Slider o	go (.bmp, 122x74 pixels) Select Reset logo on the top right side Slider O Hide the Slider re/Close buttons
Select your own lo Vith or without Slider o	go (.bmp, 122x74 pixels) Select Reset logo on the top right side Slider O Hide the Slider re/Close buttons imize/Close I Hide Minimize/Close
Select your own lo Vith or without Slider o	go (.bmp, 122x74 pixels) Select Reset logo on the top right side Slider O Hide the Slider re/Close buttons imize/Close I Hide Minimize/Close

These various options can allow you to customize the end user's experience.

Here are the different Floating Panel display options, where you can set,

- Modify the displayed text,
- Choose your preferred size, between Large and small, where you can display only icons,
- Add your own Logo,

- Customize color for the background and for the text,
- Display the slider or not,
- Display the Minimize/Close buttons or not,
- Display the Logoff icon or not...

Remote App	Remote App			
	TSPLUS	Remote App X	Remote App	
Desitop folder	Desktop folder	Desidop folder	Desktop folder	
Notepad	Notepad	Notepad	Notepad	A 1
Excel	Excel	Excel	Excel	
G fast	Foxt	GFoxt	G Foxt	si l
Powerpoint	Powerpoint	P. Powerpoint	Powerpoint	Ps
Ward	Word	Word	Word	W
Outlook	Outlook	Oc Outlook	Ocutiook	0
Logoff	Logoff	Logoff	Logoff	U

Please note that over 8 applications, the Floating Panel automatically switch to small-size. If you still want it to display the Applications names, select "Do not switch to Small Size (Only Icons) over 8 applications.

The **Folder Panel** is customizable as well and enables to display the assigned applications, the user Desktop folder or one specific folder content in your session with many display options:

Floating	/Folder P	anel		_ ×
O Float	ting Panel prefere	ence 💿 Folde	r Panel preference	
Folder Panel				-
Display or	nly Assigned appl	lications		
O Display th	e user Desktop f	older content		
	ne folder specific		Select	
Hide title t	bar 🗌	Hide log off butt	on	
Panel Size				
◯ Small	Medium		Full screen	
Panel position				
 Center 	O Top left	O Center ali	gned left side	
	yle () Windows :		Preview Sav	e

You can change the Folder Panel size, position and style (Pop-up or Windows) at your convenience:

					🐼 Remote App	- • •
calc	Desktop folder	Excel	FoxitReader	Notepad		Excel FoxitReader Notepad
	Po	p-up style	9		Window	ws style

###Application Panel

The Application Panel gives you the possibility to organize the displayed applications, exactly like on the Web Application Portal, but by simply assigning it to one user or group:

-1 1 T	Splus - Administration Console				- 🗆 X
		Remote Access Mana	agement Console		
ŵ	HOME	+ Add Application	🧪 Edit Application	X Remove Application < >	Section Application
	APPLICATIONS	Desktop, Taskbar, Floating Pan	el and Application Danal	Select an Application	to Edit or Assign users/groups to it
₽	PRINTER			Application Panel User Assignment	- 🗆 ×
O	WEB	Microsoft TSplus Remote Remote Desktop Taskbar	FloatingPanel Applicati Panel	Select which users and groups will be able to s application: All authenticated users	ee and run this
₽	FARM	Published Applications	9	Specified users and groups Users and Groups	
ి	SESSIONS	Notepad Foxit	OpenOffice	DESKTOP-SCVIIVH\John	
ez,	SYSTEM TOOLS				
鐐	ADVANCED				
చి	ADD-ONS				
©7	LICENSE			Add Remove	
				Save	Cancel

The Administrator can customize it by choosing to display the TSplus logo or his own logo, display the line header below the logo and the footer, change the color or choose to not display any of it at all by unselecting the corresponding boxes. He can also adjust the number of displayed applications by lines and columns by entering the number of applications displayed per line, as well as the alignment and name of the Application panel.

- 1 0 T	Splus - Administration Console						- 🗆 X
		Remote Access Man	agement Console				
ŵ	НОМЕ	+ Add Application	Edit Application	imes Remove Application	<	>	Sign Application
	APPLICATIONS			_	Select an	Applicatio	on to Edit or Assign users/groups to it
₽	PRINTER	Desktop, Taskbar, Floating Pan		Application Pa	anel se	ttings	- ×
O	WEB	Microsoft TSplus Remot Remote Desktop Taskbar	e FloatingPanel Applica Pan	I I	u halaw ihaa	lana	
₽	FARM	Published Applications	9	Display the line head Display the footer on Oxfdfefe	the Panel b		de
ి	SESSIONS	Notepad Foxit	OpenOffice	Select your own logo (.br Select	np, 122x74	pixels)	
e,	SYSTEM TOOLS			2 Number of appl Application Panel displ		splayed 'pe	er line'
鐐	ADVANCED			◯ Aligned center	Alignet	ed left	
చి	ADD-ONS			My RemoteApp	Title disp	lay name	
ତ୍ୟ	LICENSE						

For example, display six Apps in one column, without logo; or displayed on 2 columns and 3 lines, with the TSplus logo:



Secured Folder Sharing - Folder.exe

The Folder application will securely display the content of a folder that you will make available for your users. First, create a folder on your server with Applications or documents that you want to share. Open an explorer.exe and locate the folder.exe application in C:\Program Files\tsplus\UserDesktop\files:

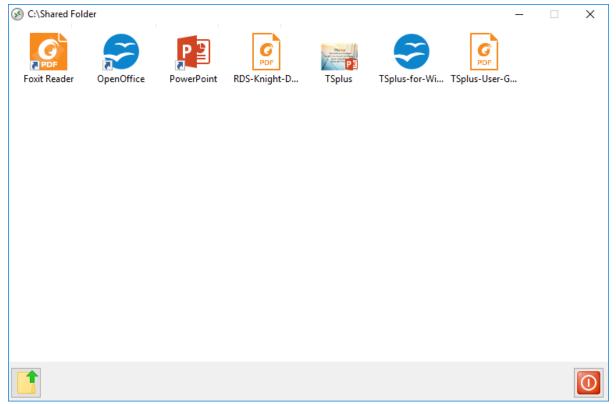
File Home Share View Manage ← → ↑ • • Image Image • • Image Image • • Image Image • • Image Image • Image • •	Content of the second s	Type Si
TSplus Name Clients □ accumentation UserDesktop □ files ico □ FarmManager.exe.config icons □ FileTransfer.bin	Date modified 1/10/2019 11:39 AWI 9/20/2018 2:22 PM 2/4/2019 9:01 AM 9/20/2018 2:20 PM 9/20/2018 2:22 PM 2/4/2019 9:00 AM 9/20/2018 2:22 PM	Type Si Lext Document ICO File Application CONFIG File Application BIN File
Clients accumentation UserDesktop sexit files FarmManager ico fileacl icons FileTransfer.bin	1/ 10/2019 11:39 AW 9/20/2018 2:22 PM 2/4/2019 9:01 AM 9/20/2018 2:20 PM 9/20/2018 2:22 PM 2/4/2019 9:00 AM 9/20/2018 2:22 PM	Iext Document ICO File Application CONFIG File Application BIN File
Clients exit UserDesktop SarmManager files FarmManager.exe.config ico Ifileacl icons IfileTransfer.bin	9/20/2018 2:22 PM 2/4/2019 9:01 AM 9/20/2018 2:20 PM 9/20/2018 2:22 PM 2/4/2019 9:00 AM 9/20/2018 2:22 PM	ICO File Application CONFIG File Application BIN File
UserDesktop wit Image: Image	2/4/2019 9:01 AM 9/20/2018 2:20 PM 9/20/2018 2:22 PM 2/4/2019 9:00 AM 9/20/2018 2:22 PM	Application CONFIG File Application BIN File
files FarmManager ico FarmManager.exe.config icons FileTransfer.bin	9/20/2018 2:20 PM 9/20/2018 2:22 PM 2/4/2019 9:00 AM 9/20/2018 2:22 PM	CONFIG File Application BIN File
ico FarmManager.exe.config	9/20/2018 2:22 PM 2/4/2019 9:00 AM 9/20/2018 2:22 PM	Application BIN File
icons	2/4/2019 9:00 AM 9/20/2018 2:22 PM	BIN File
	9/20/2018 2:22 PM	
		Application
themes 🐼 FileTransfer	2/4/2010 Q-00 AM	
Windows Defender	2/4/2015 5:00 AM	BIN File
Windows Mail	9/20/2018 2:22 PM	Application
folder.bin	2/4/2019 8:58 AM	BIN File
Windows Media Player 😕 folder	9/20/2018 2:22 PM	Application
, Windows Multimedia Platform	9/20/2018 2:22 PM	ICO File
windows nt 📄 FreeCertificateManager.bin	2/4/2019 8:59 AM	BIN File
📙 Windows Photo Viewer 🛛 🖓 FreeCertificateManager	9/20/2018 2:22 PM	Application
Windows Portable Devices 📄 FullDesktop.bin	2/4/2019 8:58 AM	BIN File
WindowsPowerShell	9/20/2018 2:22 PM	Application
ProgramData GatewayReverseProxySetup.bin	2/4/2019 8:59 AM	BIN File
GatewayReverseProxySetup	9/20/2018 2:22 PM	Application
Recovery group_16	9/20/2018 2:21 PM	ICO File
tmp 🖬 group_refresh	9/20/2018 2:21 PM	ICO File
🔥 Users 💿 💽 groups.dll	9/20/2018 2:22 PM	Application extens
🔄 Windows 💿 🚳 groups_x64.dll	9/20/2018 2:22 PM	Application extens
wsession	2/4/2019 9:00 AM	BIN File
DVD Drive (D-1) V 18 items 1 item selected 197 KB		==

Create a shortcut of this file. Edit the properties of this shortcut by right clicking on it. Then modify the target path of the shortcut by entering the path of your applications folder on the "Target" line, after the original target path, for example:

"C:\Program Files\tsplus\UserDesktop\files\folder.exe" "C:\Shared Folder"

🕖 folder - Sho	tcut Prope	erties			>			
	-							
Security	D	letails		Previous	Versions			
General		Shortcut Compatibility			patibility			
folder - Shortcut								
Target type:	Application	n						
Target location	: files							
<u>T</u> arget:	UserDesk	top\files\fo	lder.exe	" "C:\Sha	ared Folder"			
Shortcut key: None								
<u>R</u> un:	Normal w	indow			~			
Comment:								
Open <u>F</u> ile L	ocation	<u>C</u> hange	lcon	Adv	vanced			
		ОК	Can	icel	Apply			

When you open the folder.exe shortcut, it should look like this (with your own documents and applications):



This shortcut can be copied to a user's profile desktop folder or you can publish the folder.exe for a user as an application. If you do the latest, you will have to indicate the path of your folder in the Command Line option section:

1 1 T	Splus - Administration Console	- 1080A			- 🗆 X
	TSPLUS	Remote Access Management Console			
ŵ	HOME	+ Add Application / Edit Application X Remove Application	<	>	⊖ Assign Application
	APPLICATIONS	Sei	elect an Aj	pplicatio	n to Edit or Assign users/groups to it
	Publish Users	Desktop, Taskbar, Floating Panel and Application Panel			
ð	PRINTER	New Application – 🗆 🗙			
Q	WEB	Path/Filename: C.\Program Files (x86)\TSplus\UserDesktop\files\folder.exe	3		
₽	FARM	Start Directory: C.\Program Files (x86)\TSplus\UserDesktop\files			
ి	SESSIONS	Display Name:			
ಶ್ಮ	SYSTEM TOOLS	Documents Command line option:			
鐐	ADVANCED	CAShared Folder Window State:			
చి	ADD-ONS	Default (Maximized if single application on Web/Mobile client) V			
©7	LICENSE	Save Test Cancel			

There is an alternative way of sharing a Folder of documents.

Publishing a shared folder as a unique application :

Add a new application. In the display name type in the name of the shared folder or any name

you want. Click on the browse button located on the right side of the "Path/Filename" field and locate C:\Windows\explorer.exe. The start directory will be filled in automatically with the path of explorer.exe. In the Command line option field, type in the path of the shared folder, it can be a local folder or a network shared folder using a UNC path (example : \data\shared folder) Fill in the field below with your shared folder information:

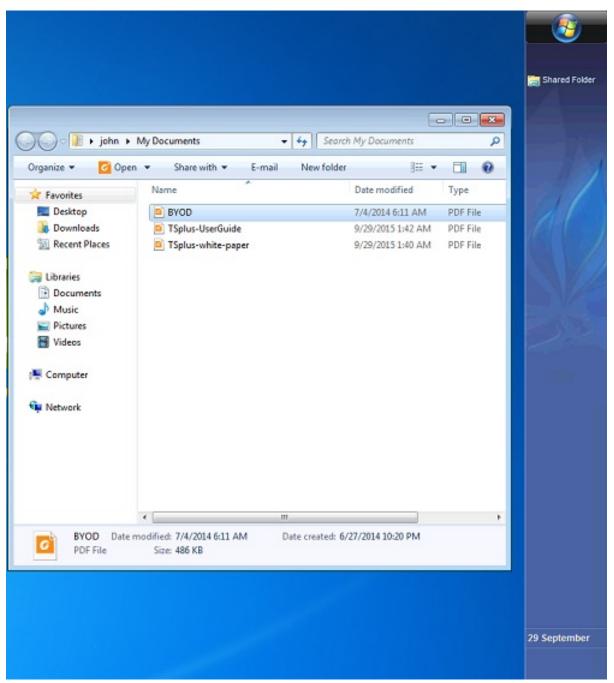
🗍 New Application	—		×
Path/Filename:			
C:\\Windows\explorer.exe			D
Start Directory:			
C:\\Windows			E)
Display Name:			
Windows Explorer			
Command line option:			
C:\Shared Folder			
Window State:			
Default (Maximized if single application on Web/Mobile client)		~	
Save Test	Canc	el	

Then click on "Save".

Click on the "Assign application" tab. Check the TSplus Remote Taskbar and Shared Folder boxes:

.¶∦ Т	Splus - Administration Console	1000				- 🗆 X
	TSPLUS	Remote Access Mana	gement Console			
ŵ	HOME	+ Add Application	Edit Application	X Remove Application	< > 2/ Ass	ign Application
	APPLICATIONS				Select an Application to Edit or	Assign users/groups to it
	Publish	Desktop, Taskbar, Floating Pane	and Application Panel	*		
	Users	Microsoft TSplus Remote	FloatingPanel Applicatio	n Desktop folder		
¢	PRINTER	Remote Desktop Taskbar Published Applications	Panel			
O	WEB					
₽	FARM	Shared Folder				
گ	SESSIONS					
ą	SYSTEM TOOLS					
鐐	ADVANCED					
చి	ADD-ONS					
©7	LICENSE					

Here is the result, when you open a session with an rdp client, you will see the TSplus taskbar with the shared folder application:



You can also do this with the floating panel. Open an admin tool and click on the "Assign application" tab. Check the Floating Panel and the Shared Folder boxes.

Here is the result:

			14114		
	00	My Documents		ch My Documents	۹ ا
Remote App TSPLUS Shared Folder Logoff	Organize Vinclude	in library Share with Name BYOD TSplus-UserGuide TSplus-white-paper	New folder	Date modified 7/4/2014 6:11 AM 9/29/2015 1:42 AM 9/29/2015 1:40 AM	Type PDF File PDF File PDF File
	3 items		***		Þ

Free and Easy-to-install HTTPS Certificate

Overview

Starting with version 9.20, Terminal Service Plus provides an easy to use feature to generate of a free and valid HTTPS certificate.

In 3 mouse clicks you will get a secured valid certificate, renewed automatically, and configured automatically into Terminal Service Plus built-in web server.

This feature uses <u>Let's Encrypt</u> to provide a free and secure HTTPS certificate for your HTTPS connections.

Prerequisites

Please ensure that your Terminal Service Plus server meet these requirements before using the Free Certificate Manager:

•

You must **use Terminal Service Plus built-in web server listening on port 80 for HTTP**. This is required by Let's Encrypt domain ownership validation process.

•

Your **server's domain name must be accessible** from the public Internet. This is required as well to validate that you are the real owner of the domain.

•

You must **run this program on the Gateway server or a Standalone server, not an Application server** (except if your Application Server is accessible from the public Internet and has a public domain name).

It is not possible to get a certificate for an IP address, be it public or private. It is not possible to get a certificate for an internal domain name (i.e. a domain which only resolves inside your private network).

Free Certificate Manager GUI

To open Terminal Service Plus Free Certificate Manager GUI, open Terminal Service Plus AdminTool, click on the "Web - HTTPS" tab, then click on "Generate a free valid HTTPS certificate" as shown in the screenshot below:

640 I -	Splus - Administration Conso	bie - ig in inge					
	TSPLUS	Remote Access N	/lanagement C	onsole			
ት	НОМЕ						
3	APPLICATIONS	Generate a	free valid HTTPS certific	ate			
3	PRINTER	🌯 HTTPS Certi	ficate Toolkit				
D	WEB						
	Web Portal	HTTPS Protocols a Protocols	nd Ciphers				
	нттру	SSL v3	TLS v1	☑ TLS v1.1	🗹 TLS v1.2	✓ TLS v1.3	
	Web Server	Ciphers					
:	FARM	SSL_DHE_RSA	_WITH_3DES_EDE_CBC_9 _WITH_3DES_EDE_CBC_9 H_3DES_EDE_CBC_SHA				^
5	SESSIONS	SSL_RSA_WITH	1_RC4_128_SHA				
6	SYSTEM TOOLS	TLS_DHE_DSS	WITH_AES_128_CBC_SH WITH_AES_128_CBC_SH WITH_AES_128_GCM_SH	A256			
3	ADVANCED	TLS_DHE_DSS	WITH_AES_256_CBC_SH WITH_AES_256_CBC_SH	A			~
3	ADD-ONS	Di	sable weak parameters			Save	
5	LICENSE						

The Free Certificate Manager GUI will open and remind you about the prerequisites, as shown in the screenshot below:

😇 Generate a free valid HTTPS certificate — 🗌 🗙
Prerequisites
Please take a moment to read this warning
This feature uses Let's Encrypt (http://letsencrypt.org) to provide a free and secure HTTPS certificate for your HTTPS connections. Our Support Team might not be able to support this feature. Requirements: - You must run this program on the Gateway server or a Standalone server, not an Application server - You must use TSplus built-in web server listening on port 80 for HTTP - Your server's domain name must be accessible from the public Internet Please only click 'Next' if you fully understand the consequences.
×.
< Back Next > Cancel

Please read carefully and check that your server meet all the requirements, then click on the "Next" button.

Step 1: Enter your Email

As shown in the screenshot below, you only need to enter a valid email address.

This email will not be used to spam you. Actually it will not even be sent to Terminal Service Plus or any third party, except the certificate issuer: Let's Encrypt.

They will only contact you if needed, according to their Terms Of Service.

Generate a free valid HTTPS certificate	_		×
Registration			
Let's Encrypt account creation			
Administrator Email:			
laura.grenier@terminalserviceplus.com]
Please enter a valid address.			
Let's Encrypt will only contact you if required and only regarding the certificate.			
< Back Next >		Cance	ł

Enter a valid email, then click on the "Next" button.

Step 2: Accept the Terms Of Service

As shown in the screenshot below, you will be able to open Let's Encrypt Terms Of Service by clicking on the big button.

🗺 Generate a free valid HTTPS certificate		×
TOS Agreement		
Let's Encrypt Terms Of Service	 	
Click here to read Let's Encrypt TOS		
☑ I agree to Let's Encrypt TOS		
< Back Next >	Cance	ł

To accept these Terms Of Service and continue, check the checkbox and click on the "Next" button.

Step 3: Enter the server's Domain Name

As shown in the screenshot below, you only need to enter your server's public domain name.

🔄 Generate a free valid HTTPS certificate —	×
Domain Validation	
Automatic validation of domain ownership	
Server Web Domain Name:	
terminalserviceplus.ddns.net	
Please enter the fully qualified domain name of the current server.	
This is the domain you are using to access this server from the Internet, without protocol (http://) and without port (':443').	
Example: server1.example.com Example: example.com,www.example.com	
< Back Next > Cancel	

This is the public Internet accessible Domain Name, something like gateway.your-company.com. You can also enter another domain name or a subdomain name, separated with a comma. Example: "server1.example.com,<u>www.server1example.com</u>"

As explained in the GUI, do not add a protocol prefix and/or a port suffix, just enter the clean domain name(s).

The certificate will be generated for this domain name, and it will only be valid on a web page hosted at this domain name. If your users connect to your Web Portal using <u>https://server1.example.com:1234</u>, then you must enter "server1.example.com".

Enjoy your Certificate!

📰 Generate a free valid HTTPS certificate —	×
Finished	
Certificate installed successfully!	
Your free certificate has been installed successfully. It will be automatically renewed every 2 months, without any downtime. We strongly advise you to make a regular backup of the 'C:\Program Files	
(x86)\TSplus\UserDesktop\files\.lego'folder, as it contains your Let's Encrypt account private key and your domain private key.	
< Back Finish Cance	al I

Terminal Service Plus Free Certificate Manager will now use all the data to connect with Let's Encrypt, validate that you really own the domain name you typed, and get the matching valid certificate.

Once the program receives the certificate, it will automatically handle all the required file format conversions and softly reload Terminal Service Plus built-in web server in order to apply the new certificate to every new connection. The web server is **not** restarted and no connection is stopped.

Certificate Renewal

Let's Encrypt certificates are valid for 90 days.

Terminal Service Plus will automatically renew the certificate every 60 days for safety. A check is done at every reboot of the Windows server, and then every 24 hours.

You can manually renew your certificate by opening the Free Certificate Manager tool. It will display the domain name of the certificate and its expiration date, as shown in the screenshot below.

📰 Genera	te a free va	alid HTTPS cer	tificate			9		×
Certifica	ate Renew	val						
Rene	ew an existi	ng certificate				 		
Emai	il:	laura.grenier@	terminalservio	ceplus.co	m			
Dom	ain:	terminalservice	plus.ddns.ne	t				
Expir	re:	Feb 6 11:10:00	2019 GMT					
They We : (x86) and :	v will be auto strongly adv \\TSplus\Us	ficates are valid omatically renew rise you to make serDesktop\files n private key. n	ed every 60 a regular ba	ckup of th		account pr	ivate key	
			< Ba	ack	Nex		Cance	*

To manually renew your certificate, just click on the "Next" button.

The "Reset Domain" button on this window deletes the SSL certificate and reconfigure the Web Server to its original state before using the Certificate Manager.

Best Practices

If no error occurs, Terminal Service Plus will renew the certificate automatically every 60 days. We recommend that you **check every 60-70 days** that your certificate has been automatically renewed.

We also recommend that you **backup at least every month** the following folder and its sub-folders:

C:\Program Files (x86)\TSplus\UserDesktop\files.lego

This is an internal folder, containing your Let's Encrypt account private key, as well as the key pair of your certificate.

Troubleshooting

In case of an error, please contact support and email them the following log file:

C:\Program Files (x86)\TSplus\UserDesktop\files.lego\logs\cli.log

This log file (and maybe the other log files in the same folder) should help our support team to investigate and to better understand the issue.

If you want to restore a previously used certificate, go to the folder:

C:\Program Files (x86)\TSplus\Clients\webserver

It will contain every "cert.jks" files used. These are the "key store" files and we never delete them, we only rename them with the date and time of their disabling.

Error Codes

Error 801: Free Certificate Manager was not able to register your Let's Encrypt account. Check your Internet connection. Check that your email is not already registered at Let's Encrypt. Try again with another email.

•

Error 802 & Error 803: Free Certificate Manager could not retrieve Let's Encrypt Terms Of Service URL address. This is a non blocking error: you can still continue and accept Let's Encrypt Terms Of Service - be sure to read them from your browser first of course.

•

Error 804: Free Certificate Manager was not able to validate your agreement to Let's Encrypt Terms Of Service with Let's Encrypt servers. Check you Internet connection. Try again.

•

Error 805 & Error 806: Free Certificate Manager was not able to validate that you own the domain you entered during certificate creation (Error 805) or certificate renewal (Error 806). Check again all the prerequisites. Check your Internet connection. Check that your web server is listening on port 80. Check that you do not use a third-party web server such as IIS or Apache. Check that your domain name is accessible from the public Internet.

Gateway Server: Prevent RDP access and allow HTTP

There are 2 ways to access the Gateway Server:

- HTML5 / HTML
- RDP Session (via the Gateway IP/DNS Port number)

How to LOCK DOWN HTML/HTML5

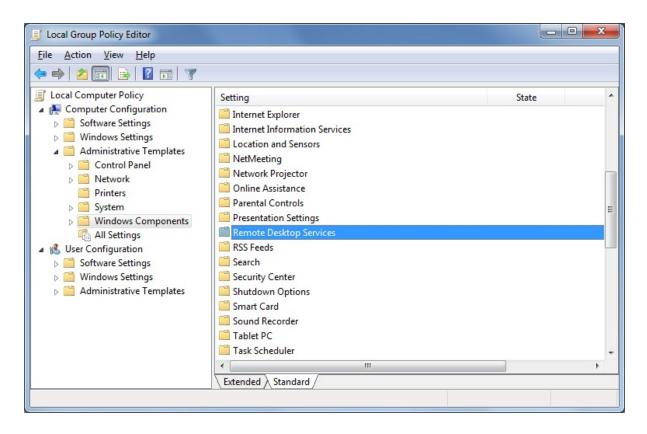
We can use mstsc with a PORT number and RDP into a TSplus Application / Gateway Server.

However, if we use these advanced Security tools located the TSplus Admin Console on the Gateway Server, by going on the Security tile/tab, then clicking on the Advanced Security options tile...:

The Server advanced security options
Microsoft Remote Desktop Client Restrictions
Deny access from Microsoft RDP client
Deny access from Outside (only LAN)
Limit access to the members of Remote Desktop Users
Encrypts end-to-end communications
Block all incoming access to this server
Disable UAC and enhance Windows access
Allow Windows Key
Allow only users with, at least, one assigned application
Allow CUT/PASTE within a session
Web Portal Access Restrictions
No Restriction
Web Portal Access is mandatory for everyone
Web Portal is mandatory, except for Admins
Prohibit the Web Portal for Admins accounts

...the access is denied when trying to connect with RDP. To avoid this behavior, on the Gateway Server, you will have to do the following:

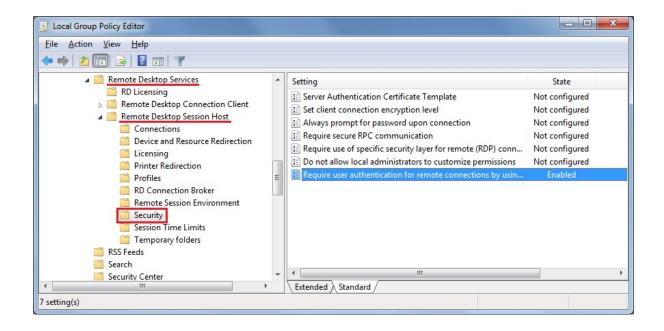
• Go to Gpedit.msc, then under Computer Configuration, click on the Administrative Templates folder, on the Windows Components folder and on Remote Desktop Services:



• Then, click on the Remote Desktop Connection Client folder, double-click on the "Allow .rdp files from unknown publishers" setting and enable it, as well as the "Configure server authentication for client":

<u>F</u> ile Action <u>V</u> iew <u>H</u> elp (=				
 Network Projector Online Assistance Parental Controls Presentation Settings Remote Desktop Services Remote Desktop Connection Client Remote Desktop Session Host RSS Feeds 	* H	Setting RemoteFX USB Device Redirection RemoteFX USB Device Redirection RemoteFX USB from valid publishers and user's default .rdp RemoteFX USB from unknown publishers RemoteFX USB Device Redirection For ont allow passwords to be saved RemoteFX USB Device Redirection for client RemoteFX USB Device Redirection for client RemoteFX USB Device Redirection for client RemoteFX USB Device Redirection RemoteFX USB Device Redirectio RemoteFX USB Device Redirection RemoteFX USB D	State Not configured Enabled Not configured Not configured Enabled	

• Under the Remote Desktop Client menu, click on the Remote Desktop Session Host folder, then on the Security folder. Enable the "Require user authentication for remote connections by using Network Level Authentication" setting.



Gateway Feature

Terminal Service Plus Gateway has a lot of benefits.

It allows you to assign servers to users or groups.

Doing so, your users will be able to **access their assigned servers on the web**. This feature is useful if you plan on having a large number of users and <u>load-balancing</u> is required in any case.

Overview

A server can be set as the Gateway of your farm of servers.

- You can Add/Edit/Remove servers from your farm.
- You can assign one or several servers to a user / a local group / an Active Directory group. Note: Assigning servers only works on the web, not with connection clients.

According to his credential, the user will be able to choose which server he wants to access in the list of servers assigned to him.

If the farm is within a Domain, the Gateway will use his AD credentials and the user will connect with Single Sign-On (SSO).

Otherwise, he must have the same local credentials on each server.

Managing the Servers of the Gateway

Open the Admin Tool and click on the Farm tab, then on Assigned Servers.

1 8 T	Splus - Administration Conso	ole
ŵ	HOME	^
	APPLICATIONS	
ð	PRINTER	
O	WEB	
₽	FARM	
	Manage	
	Reverse-Proxy	
	Load Balancing	
	Assigned Servers	
å	SESSIONS	
Z	SYSTEM TOOLS	
鐓	ADVANCED	
ස	ADD-ONS	
©7	LICENSE	¥

Click on the "Manage Servers" button to open the Gateway Portal Servers Management tool:

US1 (192.1.245.245)	Add a new Server
US2 (192.168.126.126)	Edit Server
	Remove Server
	Manage Users

When you click on the "Add a new Server" button you can then add a Terminal Service Plus Server by Display name and IP address (you can type an IP or a domain name, without a port number):

📕 Add a new Sen	/er	×
Display Name:	US1	
Server Address:	192.1.245.245	
Cancel		Save

When you are done, please click the "Save" button to add the server to the Servers list.

To remove a server from the Servers list, click on the server you want to remove and then click on the "Remove Server" button.

After a confirmation message, the server will then be removed from the list.

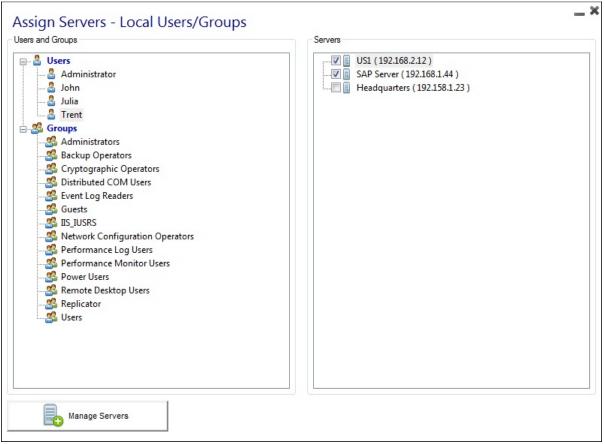
You can also edit a server by selecting it on the list and clicking on the "Edit Server" button.

Managing Gateway Users

Warning: Don't add users or groups here if you aim to use <u>load-balancing</u>. To manage the users please click on the "Assign Servers to Users" button. The window "Assign Servers per User or per Groups" will open:

Т Д Т:	Splus - Administration Conso	ole
	TSPLUS	
ŵ	HOME	^
	APPLICATIONS	
₿	PRINTER	
0	WEB	
₽	FARM	
	Manage	
	Reverse-Proxy	
	Load Balancing	
	Assigned Servers	
å	SESSIONS	
Z	SYSTEM TOOLS	
鐓	ADVANCED	
ස	ADD-ONS	
©77	LICENSE	~

To assign a server to a user, simply click on the user in the "Users and Groups" list and then check the server's checkbox in the "Servers" list. To remove a server from a user, simply click on the user in the "Users and Groups" list and then uncheck the server's checkbox in the "Servers" list.



Notes

- The server must be added first to assign it to a user.
- The example above is for a Domain or a Workgroup.
- If you use a workgroup the users logins must be the same on each Terminal Service Plus server that you assign.

Example of what you will get when users connect to the Gateway

John can select the server. He wants and he will get an auto-logon to this server:

TSPLUS
Log on
john 🗸
••••
Domain:
Accounting
Accounting SAP server Headquarter R&D Office

If he types a wrong password, John will have to retype his password:

	TSPLUS		
	Log on		
	john	1	
	••••	x	
	Domain:		
- 53	Headquarter 🔻		
	O HTML5 SemoteApp Invalid credentials		
	Log on		
	Log on		

Julia has a different list of possible servers:

L L	g on		
	julia	1	
	•••••		
	Domain:		
	Accounting		
	Accounting SAP server		
a last	Log on		

Someone tries to hack the Gateway. He does not see any server and the Gateway blocks his web access.

	TSPLUS	
	Log on X	
	••••••	
	Domain:	
2	O HTML5 O RemoteApp	
	Log on	

TSplus Farm of Servers Architecture

There are 2 options to deploy a TSplus farms of servers:

Option 1: All your servers have public IP addresses and can be reached from the Internet. OR **Option 2**: Only the Gateway Portal can be reached from the Internet. The Gateway is providing a "Reverse Proxy Role".

In both options:

• *

- Every server has the same TSplus configuration.
- Every server has the same HTTP/HTTPS ports.
- To publish a new Application just add it to your users/groups of users on the AdminTool.

Of course, make sure that this application is installed on the targeted Application Servers. All Web Access types are available without any specific configuration: RemoteApp and HTML5 clients.

ТДТ	Splus - Administration Console			×
	TSPLUS Re	mote Access Management Console		
ŵ	номе	P Web Portal Design		
	APPLICATIONS	Web Portal Preferences		1
₽ ©	WEB	Applications Portal		•
•	Web Portal			
	HTTPS Web Server	😌 Web Credentials		
₽	FARM			
	SESSIONS	C RemoteApp Client		
	SYSTEM TOOLS	HTML5 Client		
	ADVANCED ADD-ONS	8 HTML5 Top Menu		
	LICENSE			

In the Admin Tool, click on the Web tile, then click on the Web Portal Preferences tile.

Check the "Generate a Gateway Portal enabled Web Page" box, then click on "Save".

					3	ĸ
Preferences						
Default Values						
Login:						
Password:						
Domain:						
	Show the Dom	nain field	Reme	mber last login		
Advanced						
Keyboard:	as_browser					
Access Type						
Available Clients:	HTML5	(iPad, iPhone	e, Android d	evices, comput	ers)	
	Remote App	(Windows P	Cs)			
Gateway Portal:	📝 Generate a Ga	ateway Portal	enabled W	eb Page		
Upload: Folder to selec	t files.	⊂ Downloa	d: Folder for	all received file	s	
 User Desktop (defa 	ault)	O User	Desktop (de	efault)		
My Documents			ocuments			
WebFile folder		Web	File folder			
Custom folder:		Custo	om folder:			
	Select			Sele	ct)	
Folder path from wi select files to be up				downloaded file	s	
	biodaca.		e stored on	the Server.		
Downloaded file	es from the users PC					
		will be stored	l in the spec	ified folder.		
	es from the users PC in the user PC, Down	will be stored load button o	l in the spec	ified folder.		
(Drag/Drop from	es from the users PC in the user PC, Down	will be stored load button o	l in the spec or File Transf	ified folder.		1

On the Web Access page, your users will be able to choose between the servers that were assigned to them:

TSPLUS	5
Log on	
john] 🗸 📘
••••	
Domain:]
Accounting	
Accounting SAP server Headquarter R&D Office	

Option 1 - All Servers have their own Public IP Address and can be reached from the Internet.

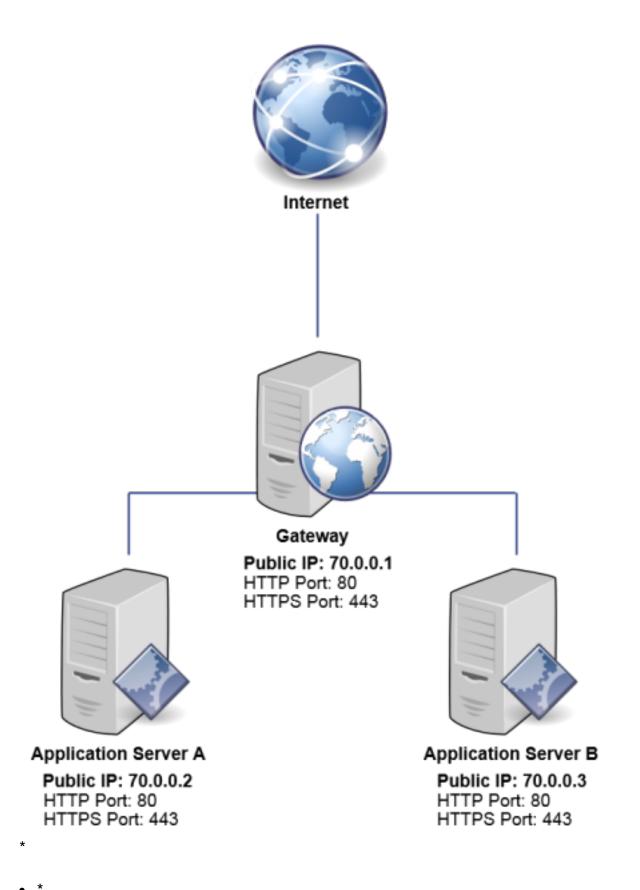
This is the recommended architecture to use Terminal Service Plus Gateway.

This architecture follows best practices and allows the IT Administrator to industrialize its environment:

- Every server has the same Terminal Service Plus configuration
- Every server has the same HTTP/HTTPS ports
- Deploying a new Application server is only a matter of minutes (just add the server to the farm in the AdminTool on the Gateway server)

With this architecture, all access types are available without any specific configuration: Remoteapp and HTML5 clients.

This architecture is described in the diagram below:

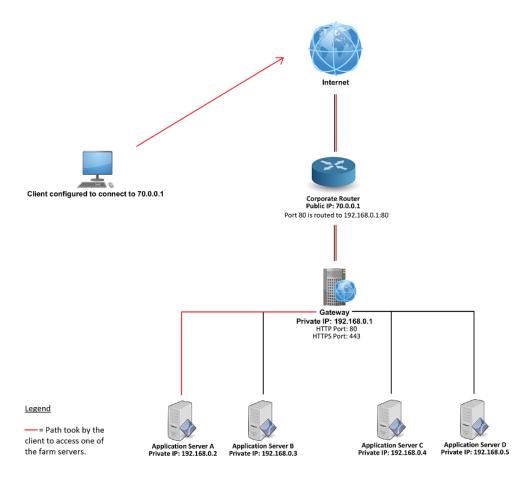


Option 2: Only the Gateway Portal can be reached from the Internet and includes a "Reverse Proxy Role".

Terminal Service Plus Gateway can also be set up with only 1 Public IP Address.

The Gateway redirects any external connection request to any available server. If you do not use the load balancing feature, users will connect to their assigned server(s).

This architecture is described in the diagram below:



For more information about the Reverse Proxy Role, see the <u>Reverse Proxy Feature</u> <u>documentation</u>.

TSplus farm of Servers without Load Balancing

You can set a range of Application Servers. Each of them with different types of applications (Accountancy Server, Payroll Server, Office Automation Servers...). In such deployment, the Administrator will enter a list of servers and will assign servers to users. For example, the user John will be allowed to access to the 3 servers, but the user Paul will have access only to the Payroll Server.

To setup this kind of Farm, please read the paragraph above on Managing Gateway Users.

Load Balancing and Failover :

The Gateway Feature is not compatible with Load-Balancing. When load balancing is activated, the user will not be able to choose the server on which he wants to open a session. It is the TSplus load balancer which checks which server is less loaded and will assign it to the incoming user request. To setup a load balanced Farm of Servers, please read <u>this page</u>.

TSplus: Get started

Step 1 : Installation.

Installing Terminal Service Plus is an easy process. Just download it from our web site, run the Setup-TSplus.exe program and wait until the program asks you to reboot. We recommend you to install Java prior to start the setup program. Java is mandatory to benefit from our great Web Access technology.

See the documentation and the video for installation.

Files are decompressed and copied into:

- C:\Program Files\TSplus folder (32-bit systems)
- C:\Program Files(x86)\TSplus folder (64-bit system).

The trial version is a full TSplus Enterprise Edition and enables up to 5 concurrent users for a period of 15 days.

After the reboot, you will see 2 new icons on your Desktop:



The AdminTool is what you need to use TSplus.



The Portable Client Generator will create a TSplus connection client for your users.

Pre-requisites:

On Server side:

From Windows XP to W10 and Windows 2003 to 2019 Server with at least 2GB of memory.

The operating system must be on the C drive. On Windows Server Environment, please make sure that the TSE/RDS role and the TSE/RDS licensing role are not installed to prevent conflict with TSplus services.

It is mandatory to use a fixed private IP address and a fixed public IP address. If your ISP (Internet Service Provider) did not provide you with a fixed public IP address, you need to subscribe to a free DNS account, see <u>this tutorial</u> for more information.

On Client side:

Microsoft workstation: Windows XP, W7, W8 and W10 are supported. A PDF Reader (like FoxIt) and Java should be installed on the users PCs. **Macintosh workstation**: You can use any MAC RDP client, or TSplus HTML5 clients.

Linux Workstation: You can use Linux Rdesktop RDP client or TSplus HTML5 clients.

Step 2 : Creating users.

After reboot, the TSplus host is almost ready to go. So the first action will be to create users and the AdminTool will help you to do so. Go to the System Tools tab, then click on "Users and Groups". This will take you to the Local Users and Groups window:

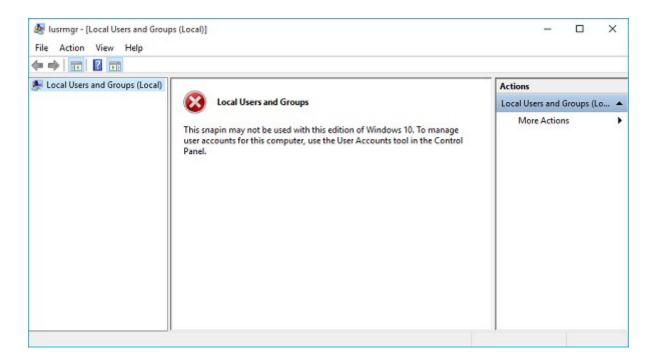
TSplus - Administration Console - 🔳 🖩	-	×
	ACCESS	
М НОМЕ		
	Services	
	2 Users and Groups	
S WEB	999 Server Properties	
FARM	🔾 Windows System Toolkit	
SESSIONS	Eccal Group Policy Editor	
SYSTEM TOOLS	Event Viewer	
袋 ADVANCED		
Հ숫 ADD-ONS		
	C) Reboot the Server	

🜆 lusrmgr - [Local Users and Grou	ps (Local)\Users]				_	×
File Action View Help						
Local Users and Groups (Local)	Name	Full Name	Desci	Actions		
📋 Users	Admin	- an - tan -	5000	Users		
🧮 Groups	New User	?	×	More Actions		•
	User name: John					
	Full name:		=1			
	Description:		=1			
	·					
	Password:					
	Confirm password:					
	User must change password at next	logon				
	User cannot change password Password never expires					
	Account is disabled					
	Help	Create Close				
	<	_	>			
	L					

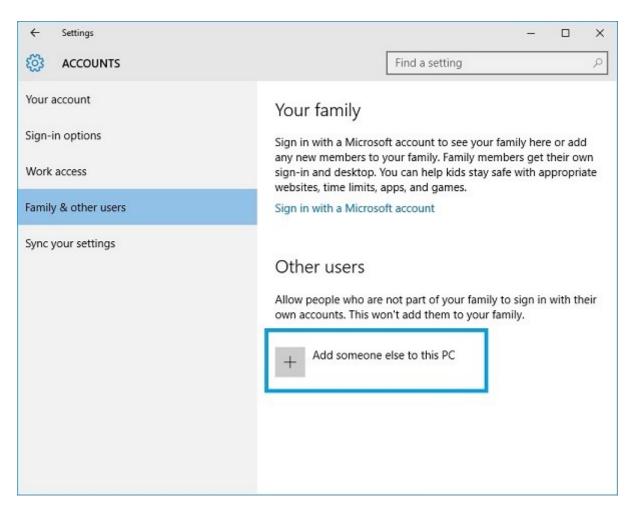
Each user must have a logon AND a password. Beware when you create users of the box checked by default: "User must change password at next logon", if you don't want your user to change his/her password each time, uncheck this box and check the "Password never expires" or "User cannot change password".

• For Windows 10 Home users, the process to create users is different, since you will get this error message if you wish to create users with TSplus:

Open the Start menu and click on Settings, then on Accounts, select the 'Family and other Users' tab, and click on the 'add someone else to this PC' button:



On the 'How will this person sign in?' window, click on the 'I don't have this person sign-in information' line at the bottom. On the next window: 'Let's create your account', click on the 'Add a user without a Microsoft account' line at the bottom and finally, fill-in the required fields to create your user.



Step 3 : Select the most suitable client for your needs.

TSplus complies with Windows RDP protocol. So, any user can connect locally or remotely with a standard Remote Desktop Connection client (mstsc.exe) or any RDP compatible client. To fully benefit from the TSplus advanced features (Seamless client, RemoteApp, Universal Printer...) you can use a TSplus generated client or the TSplus Web Portal.

TSplus is a very flexible solution and offers multiple ways to open a session:

- Classic Remote Desktop Connection (MSTSC.EXE).
- **Portable TSplus RDP client** which will display a windowed environment for your remote connection that you can minimize in the Windows taskbar.
- TSplus Seamless client which will only display applications and no desktop.
- **MS RemoteAPP client** which will display application using the native MS RemoteApp.
- Windows client over the TSplus Web Portal.
- HTML5 client over the TSplus Web Portal.

These clients give the user the following experience:

With Remote Desktop Connection (mstsc.exe)

- **Connection**: The connection is a very standard one. The Universal Printer is not supported with this type of connection.
- **Display**: Users will see their session within a Remote Desktop window. This desktop displays the content of the user's desktop folder. If the administrator has assigned specific applications with the AdminTool, only these applications will be displayed (no taskbar, no Desktop).

TSplus RDP generated client.

This is a unique TSplus solution, it empowers local and remote users to connect using one single dedicated program.

It includes the connection program, the Universal Printing advanced feature, portability with high level of security while keeping it very simple for the users. So, it is much better than a classic Remote Desktop Connection. For more information about this client generation, see <u>this</u> <u>documentation</u>

The TSplus RemoteApp generated Client (or the Seamless one).

Remote applications will exactly look like any local application. Instead of a classical Remote Desktop window, you will be free to switch between your local and remote applications without having to minimize a Remote Desktop window. If your TSplus host does not supports the MS RemoteApp (for operating systems older than Windows 7 or Server 2008, and that you don't have RDP6), you can use the TSplus Seamless alternative for the RemoteApp technology. For more information about these clients, see <u>this documentation</u>.

Accessing your TSplus server from a remote location

In order to access your TSplus server from a remote location, you will have to create a port forwarding or port redirection rule of 3389/80/443 ports depending on your preferred connection method. You can change the RDP port on the Home tab:

👖 TSplus - Administration Console		– 🗆 X
TSPLUS	Remote Access Management Console	
М НОМЕ		
	\Box	\bigcirc
	Computer name: DESKTOP-SCVIIVH Private IP 192.168.1.22	http://localhost
S WEB	Public IP 78.	The built-in HTTP server is listening on port 80
FARM	Ti TSplus ×	The HTTPS server is listening on port 443
	Enter a port number B389	
SYSTEM TOOLS	Syster Save Cancel 87:05 PM	
ស្ត្រិ advanced	Version - You are using the latest version	
값 ADD-ONS	✓ License Activated - Enterprise edition - 25 users	
ତ୍ମେ LICENSE	Send of support date:	
	English •	(?) Help

The 80/443 ports can be changed on the Web Server tab:

. ¶∦ T	Splus - Administration Conso	le –	×
	TSPLUS	Remote Access Management Console	
ŵ	НОМЕ	Default HTTP web server	
	APPLICATIONS	A built-in HTTP Web Server is provided with TSplus However, you can use a different one (IIS or Apache for example).	
₿	PRINTER	Use a different HTTP web server When using IIS or Apache, its HTTP port number must be set to 81. (Tunneling forwards this 81 port into the public HTTP port 80)	
S	WEB		
	Web Portal	Change the Web Server root path	
	HTTPS	You can change the Web Server default root path. The current Web Server root path is: C:\Program Files (x86)\T5plus\Clients\www Select a new Web Server root path	
	Web Server	C:\Program Files (x86)\TSplus\Clients\www Select a new Web Server root path	
	Lockout		
₽	FARM	Web servers options	
ి	SESSIONS	Change the HTTP/HTTPS port numbers Will not change IIS or Apache port settings	
ಶ್ಮ	SYSTEM TOOLS	HTTP: 80 + HTTPS: 443 +	
鐐	ADVANCED		
చి	ADD-ONS	Save and Restart Web Server	
<u>_</u>	LICENSE	v	

More information about changing communication ports can be found <u>here</u>.

Step 4 : Application publishing and Application Control.

One of TSplus major benefit is the freedom to assign application to user(s) or to a group of users using the AdminTool.

- If you assign one application to a user, he will only see this application.
- You also can assign him the TSplus Taskbar, the Floating Panel or the Application Panel to display multiple applications.
- You can of course decide to publish a full Remote Desktop if you want to.

Go to the Applications Tab to add, edit, remove and assign Applications.

1 1 T	Splus - Administration Console						- 🗆 X
		Remote Access Mana	agement Console				
ŵ	HOME	+ Add Application	🥕 Edit Application	X Remove Application	<	>	Second Se
	APPLICATIONS	Desktop, Taskbar, Floating Pan	el and Application Papel		Select an A	pplicatio	on to Edit or Assign users/groups to it
8	PRINTER		TSplus Remote Taskbar U	-	×		
S	WEB	Microsoft TSplus Remote Remote Desktop Taskbar	e Select which users and groups application:	s will be able to see and run this			
₽	FARM	Published Applications	Specified users and groups Users and Groups	;			
ి	SESSIONS	Notepad Foxit	DESKTOP-SCVIIVH\John				
್ನ	SYSTEM TOOLS						
鐐	ADVANCED						
చి	ADD-ONS						
©7	LICENSE		Add	Remove			
				Save Cance	9		

On this example, the administrator has decided that the user 'John' will get the TSplus Taskbar. See <u>this documentation</u> for more information.

Please visit our support pages on our web site where you will find an <u>On-line Guide</u>, video tutorials, a Support Center with an FAQ and a Forum.

ENJOY your use of TSplus !

How To: Bind Web Server to Several Network Cards

Overview

Some use case might require that Terminal Service Plus web server listens on more than one network card, for instance if the server belongs to several different networks.

This feature answers this specific need.

Binding Web Server to Several Network Cards

To bind Terminal Service Plus web server to several network cards, you need to:

Create the file "settings.bin" in the folder "C:\Program Files (x86)\TSplus\Clients\webserver"

•

•

Add the following line with all the local IP addresses for all the network cards you want to bind to, for instance:

bind_nic="127.0.0.3","127.0.0.4"

Restart webserver (AdminTool > Web > Restart Web Servers) to apply changes

Terminal Service Plus web server will now listen to all queries from all the binded network cards (in our example case the binding would be done to 127.0.0.3, 127.0.0.4 and 127.0.0.1 automatically).

How To: Add a Custom HTTP Header

Prerequisites

This feature is very technical and this documentation is only for technical experts.

You should be familiar with HTTP protocol as well as HTTP Headers.

Overview

Some use case might require that Terminal Service Plus web server returns one or more custom HTTP Headers in addition to the standard ones.

This feature answers this specific need.

Setting up a custom HTTP Header

To add your own custom HTTP Header, you need to:

- Create the file "headers.bin" in the folder "C:\Program Files (x86)\TSplus\Clients\webserver"
- Add the custom headers separated by new line, for instance case: header1=X-Frame-Options
- Restart webserver (AdminTool > Web > Restart Web Servers) to apply changes

Terminal Service Plus server will now respond to all queries with this custom HTTP Header in addition to the standard ones.

HTML Pages and Customization

You can edit the provided HTML pages with Notepad or Notepad++ to customize it user interface.

index.html page

The index.html is located in Web Server root folder path.

C:\Program Files (x86)\TSplus\Clients\www

Index.html page is the default web page. It's like a front-end Portal page with links to the connection pages which are located in \www\ folder. This web page can be copied and renamed to allow multiple configuration and / or logon information. For example let's copy and rename index.html into index2.html, this page will be available using this url http://localhost/index2.html

🗃 🔵 🗢 🕌 🕨 Computer 🕨 I	Local Disk (C:) Program Files (x86)	tsplus ► Clients ► www ►	• 4 ,	Search www	
Organize 👻 📵 Open 🛛	Print New folder			8== -	6
☆ Favorites	Name	Date modified	Туре	Size	
E Desktop	🔐 cgi-bin	1/27/2016 9:45 PM	File folder		
Downloads	downloads	1/27/2016 9:56 PM	File folder		
S Recent Places	prints	1/27/2016 9:56 PM	File folder		
	RemoteAppClient	1/26/2016 12:12 AM	File folder		
🥱 Libraries	software	1/28/2016 12:58 AM	File folder		
Documents	3 templates	1/26/2016 12:12 AM	File folder		
👌 Music	🕌 var	1/26/2016 12:12 AM	File folder		
E Pictures	index	1/27/2016 10:30 PM	Firefox HTML Doc	15 KB	
📑 Videos	index.html.bak	1/27/2016 9:56 PM	BAK File	15 KB	
	index_applications	1/27/2016 10:30 PM	Firefox HTML Doc	5 KB	
👰 Computer	index_applications.html.bak	1/27/2016 9:56 PM	BAK File	5 KB	
🚮 Local Disk (C:)	index_redirection	7/16/2015 5:52 PM	Firefox HTML Doc	1 KB	
	index2	1/27/2016 10:30 PM	Firefox HTML Doc	15 KB	
🗣 Network	jw.bin	1/26/2016 12:16 AM	BIN File	4 KB	
2 items selected D	ste modified: 1/27/2016 10:30 PM Size: 28.9 KB	Date created: 1/26/2016 12:12 AM - Shared with: Everyone	2/4/2016 6:34 PM		

Beware that if you change the "index.html" file name to "index2.html" and that you are using the Web Applications Portal, then you must change the following variable on this file: "page_configuration["applications_portal"] = "index_applications.html" to "index2_applications.html" then rename the "index_applications.html" file into "index_2applications.html".

The default index.html includes all possible options:

- · RemoteApp access to applications, connection outside the Web Browser
- Connection using HTML5 from any device
- Local printing preferences

You will be able to change header and footer in the Web portal design feature on the web portal preferences tile of the Web tab.

By editing the index.html web page, you will have access to various settings.

// ------ Access Configuration ------ var user = ""; // Login to use when connecting to the remote server (leave "" to use the login typed in this page) var pass = ····: // Password to use when connecting to the remote server (leave "" to use the password typed in this page) var domain = ""; // Domain to use when connecting to the remote server (leave "" to use the domain typed in this page) var server = "127.0.0.1"; // Server to connect to (leave "" to use localhost and/or the server chosen in this page) var port = ""; // Port to connect to (leave "" to use localhost and/or the port of the server chosen in this page) var lang = "as browser"; \parallel Language to use var serverhtml5 = 127.0.0.1; // Server to connect to, when using HTML5 client var porthtml5 = "3389"; // Port to connect to, when using HTML5 client var cmdline = ""; // Optional text that will be put in the server's clipboard once connected // ------ End of Access Configuration ------

For example I will preset demo/Psw as login/password by editing: var user = "Demo"; var pass = "Psw";

Doing so, pre-filled credentials are made visible at each visit of the portal.

Another very important configuration file is **settings.js**, located in C:\Program Files (x86)\TSplus\Clients\www\software\html5:

Organize 👻 🍎 Open 🧃	Print New folder) · · ·
🔆 Favorites	Name	Date modified	Туре	Size
📃 Desktop	\mu imgs	2/4/2016 7:15 PM	File folder	
🚺 Downloads	jwres	2/4/2016 7:15 PM	File folder	
📃 Recent Places	Iocales	1/26/2016 12:12 AM	File folder	
	🍌 own	2/4/2016 7:15 PM	File folder	
🔰 Libraries	🌋 autojump	7/29/2015 2:50 PM	JScript Script File	7 KB
Documents	📓 dt_scan	2/4/2016 7:16 PM	JScript Script File	3 KB
🚽 Music	📄 dynamicaudio	2/4/2016 7:16 PM	Shockwave Flash	2 KB
E Pictures	flash9canvas	2/4/2016 7:16 PM	Shockwave Flash	32 KB
🚼 Videos	flash10canvas	2/4/2016 7:16 PM	Shockwave Flash	32 KB
	📓 flashcanvas	2/4/2016 7:16 PM	JScript Script File	14 KB
Normal Computer	🔳 help	2/4/2016 7:16 PM	Firefox HTML Doc	15 KB
🐔 Local Disk (C:)	📓 jquery	2/4/2016 7:16 PM	JScript Script File	158 KB
	📓 jquery-1.7.2.min	4/10/2015 5:38 PM	JScript Script File	112 KB
🙀 Network	🌋 jws	2/4/2016 7:16 PM	JScript Script File	179 KB
	📓 jwweb.core	2/4/2016 7:16 PM	JScript Script File	221 KB
	📓 language	2/4/2016 7:16 PM	JScript Script File	2 KB
	📓 settings	2/4/2016 7:16 PM	JScript Script File	19 KB
	🏂 socket.io	2/4/2016 7:16 PM	JScript Script File	40 KB
	WebSocketMain	2/4/2016 7:16 PM	Shockwave Flash	176 KB

This file contains various settings for the HTML5 web client like disabling sound, clipboard or allowing session reconnection if browser tab is closed.

• Disabling clipboard:

"W.clipboard = "yes"; //or "no" "

• Disabling sound is done with this setting:

"W.playsound = false;"

• Changing default resolution for Mobile devices:

"W.viewportwidth = "1024" " - The height gets computed by browser.

• Forcing HTTPS for remote connection

```
"W.forcealways_ssl = true;"
```

• Allowing session reconnection when browser tab is closed:

"W.send_logoff = false;"

• Adding a warning pop up to prevent closing the browser tab:

search the "W.pageUnloadMessage = "" " parameter.

I have set an example of message to be used below :

W.pageUnloadMessage = "Closing this tab will disconnect your remote session, are you sure ?"; //Dialog to return when page unloads. //1. Important notice, own dialogs are not supported in all browsers. //2. HTML standard does not distinguish between page refresh and page close action, the dialog will popup on page refresh too.

× C HTML5	0	
tml		
		Confirm Navigation ×
		Closing this tab will disconnect your remote session, are you sure ?
		Are you sure you want to leave this page?
		Leave this Page Stay on this Page

The general settings for the RemoteApp web page is stored on the software folder, in two different files: **remoteapp.html** and **remoteapp2.js**.

Organize 👻 📵 Open	New folder			ii • 🗊
🔆 Favorites	Name	Date modified	Туре	Size
E Desktop	it html5	2/4/2016 7:15 PM	File folder	
	🍑 java	2/4/2016 7:15 PM	File folder	
Recent Places	🎴 js	2/4/2016 7:15 PM	File folder	
	💽 clean	1/25/2014 3:11 PM	Firefox HTML Doc	7 KB
词 Libraries	a common	10/14/2015 9:01 AM	Cascading Style S	2 KB
Documents	📓 common	1/25/2016 10:54 AM	JScript Script File	22 KB
👌 Music	common_applications	1/25/2016 10:54 AM	JScript Script File	15 KB
Pictures	📓 common-backup	1/14/2016 10:38 PM	JScript Script File	22 KB
📑 Videos	html5	2/4/2016 7:16 PM	Firefox HTML Doc	12 KB
	html5.html.bak	1/26/2016 12:16 AM	BAK File	12 KB
💻 Computer	html5-backup	1/26/2016 12:16 AM	Firefox HTML Doc	12 KB
🚰 Local Disk (C:)	index 💽	7/22/2012 9:55 PM	Firefox HTML Doc	0 KB
	🛋 inside	2/7/2015 5:12 PM	Firefox HTML Doc	19 KB
📬 Network	📓 insidech	7/22/2012 9:55 PM	JScript Script File	1 KB
	insidex	2/21/2015 2:14 AM	Firefox HTML Doc	2 KB
	💽 insidexx	2/21/2015 2:13 AM	Firefox HTML Doc	10 KB
	🥫 javaconnect	2/4/2016 7:15 PM	Firefox HTML Doc	15 KB
	javaconnect.html.bak	1/26/2016 12:12 AM	BAK File	15 KB
	💽 remoteapp	2/4/2016 7:15 PM	Firefox HTML Doc	17 KB
	remoteapp.html.bak	1/26/2016 12:12 AM	BAK File	17 KB
	😻 remoteapp2	10/14/2015 9:01 AM	Firefox HTML Doc	2 KB
	📓 remoteapp2	2/4/2016 7:15 PM	JScript Script File	14 KB
	webprint	1/24/2014 10:10 PM	Firefox HTML Doc	7 KB
	🔳 webprint_jwts	1/24/2014 10:11 PM	Firefox HTML Doc	5 KB
2 items selected	d State: 23 Shared	Size: 29.9 KB		ote Desktop Users; Ev

Example of available settings present in **remoteapp2.js** :

// Remote Desktop Server var remoteapp2_server = "; var remoteapp2_port = '443';

// Windows Authentication var remoteapp2_user = "; var remoteapp2_psw = "; var remoteapp2_domain = ";

// Optional Command Line Parameters var remoteapp2_apppath = ";

// Seamless/RemoteApp mode var remoteapp2_wallp = 'green'; var remoteapp2_seamless =
'off'; var remoteapp2_remoteapp = 'on';

// Screen var remoteapp2_color = '32'; var remoteapp2_full = '2'; var remoteapp2_width = "; var remoteapp2_height = "; var remoteapp2_scale = '100'; var remoteapp2_smartsizing = '1'; var remoteapp2_dualscreen = 'off'; var remoteapp2_span = 'off';

// Disks mapping (required for printing) var remoteapp2_disk = '1';

// Printing var remoteapp2_printer = 'off'; var remoteapp2_preview = 'off'; var remoteapp2_default
= 'on'; var remoteapp2_select = 'off';

// Hardware var remoteapp2_com = '0'; var remoteapp2_smartcard = '0'; var remoteapp2_serial = 'off'; var remoteapp2_usb = 'off'; var remoteapp2_sound = 'on'; var remoteapp2_directx = 'off';

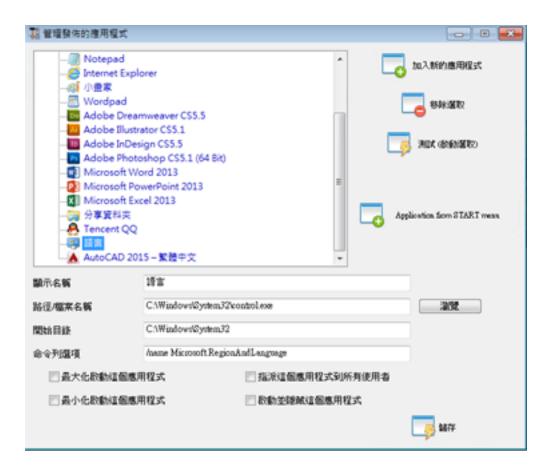
// Miscellaneous var remoteapp2_alttab = '0'; var remoteapp2_firewall = '1'; var remoteapp2_localtb = '32'; var remoteapp2_lock = 'off'; var remoteapp2_rdp5 = 'off'; var remoteapp2_reset = 'off';

HTML5 : Changing language to Chinese

You need Windows 7 Enterprise or Ultimate / Windows 8 Enterprise or Professional to use multilanguage on one system. You can install every language on the system if you need.

	・ 控制台 > 未規及安全性 > Windows Update > 爆取要安裝的更新	• *,	<u>R</u>	<i>眼空形台 \$</i>
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You could publish a language applet for users to change their own O/S language of UI and add IME (Input Method Editor).



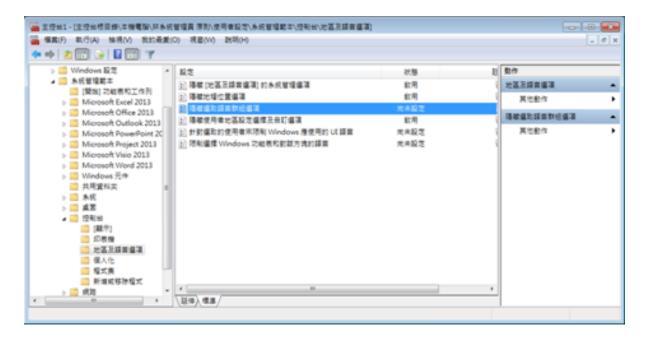
For Windows 7: control /name Microsoft.RegionAndLanguage

For Windows 8: control /name Microsoft.Language

Complete List: http://pcsupport.about.com/od/tipstricks/tp/control-panel-applets-list.htm

Optional : this is how to restrict the Control Panel behavior for users by GPO :

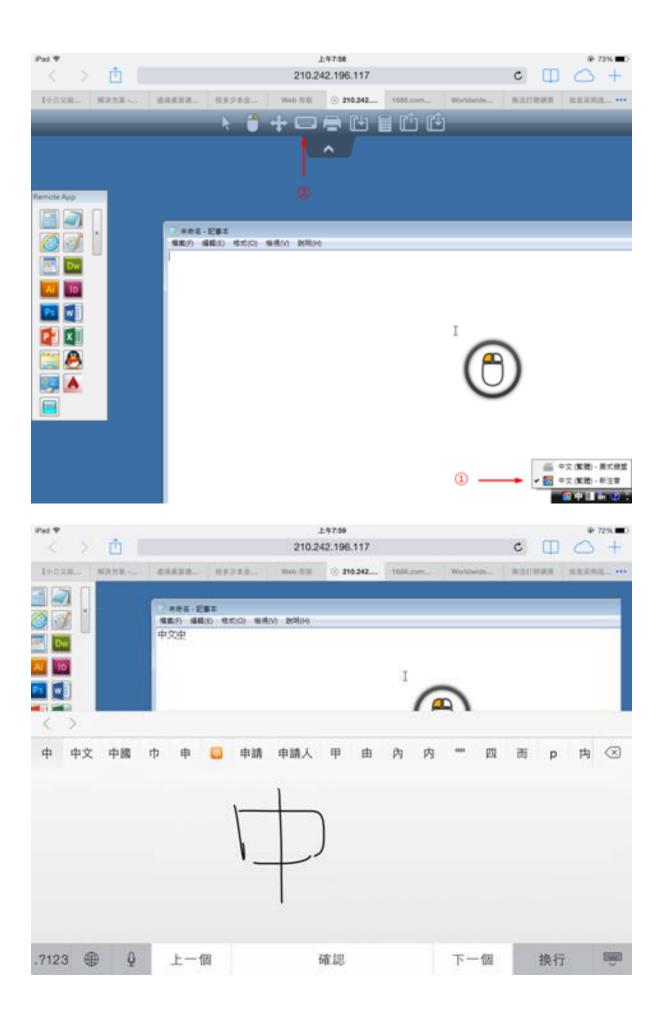
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主空社核目時 本機電師、祥永祝智理員 原則 本祝智理朝本	 股間 (銀市) 印表機 光茎及綠蜜盛頃 信人化 留式集 新城城移除程式 陸敏(控制台)時永遠開始(所再控制台項目) 質素(控制台)時永遠開始(所再控制台項目) 算 其正な助控制台項目 2) 完都干描志的控制台項目 	故題 だ 未設定 助用 気 未設定 飲用	11 (1) (1) (1) (1) (1) (1) (1) (1) (1) (動作 控制曲 英也動作	



Users can change O/S language of UI after logon system. (Users have to logout and logon again to take effect after changing this setting)



The user has to select Chinese IME first to input Chinese chars.





HTML5 Client: What is the difference between Websockets and XHR?

Websockets is the persistent connection that can be used to receive/send data without sequential order and without http header.

Xhr-polling creates new request with http header and waits for answer with http header, also sequential order.

Doing so, XHR data flow always looks like this:

HTTP_HEADER_REQUEST -> HTTP_HEADER_ANSWER HTTP_HEADER_REQUEST -> HTTP_HEADER_ANSWER and so on

also before the data can be downloaded, it must be requested with HTTP_HEADER, therefore its name: xhr-polling.

Websockets data flow may look like this:

FRAME_DATA_SEND FRAME_DATA_SEND FRAME_DATA_RECEIVE FRAME_DATA_SEND FRAME_DATA_RECEIVE FRAME_DATA_RECEIVE

Also it is random data sending/receiving without special sequential order and without any http header data.

That makes the usage with reverse proxies impossible due to the lack of Websockets support by most known reverse proxies; but half of the xhr transport may work with Apache reverse proxy.

Also see: <u>HTML5 Client: Supported Browsers</u>

HTML5 Client: RDP session resolution on mobile devices

The common screen resolution by most devices, especially mobile phones is 320x480, but that is obviously not sufficient to create the RDP session.

Therefore the resolution was preset to 800 in width. The height of resolution gets recomputed by hidden browsers native logic. The higher the width the bigger the height.

• As an example, standard resolution is 320x480, now when you set the viewport to 800, the browser recomputes the value for height for example to 800x904, when you set the width to 1280, then it's 1280x1160 etc.

The height and width depend on landscape/portrait view of your device, like 800x904 or 904x800 etc. Each browser can recompute it on its own logic to fit the rdp screen into the viewport of your device and may differ depending on the browser even when used on same device.

If you set the height manually, then you will break the viewport ratio of your device and the final RDP session will be out of your port view, and to reach these areas you will have to scroll to wished positions.

• Therefore it is recommended not to set height manually, but let the device choose automatically the height.

If you need more height, increase the width! By testing on mobile phone devices, the good value for width was 800. Though you must pay attention : the CPU's on most mobile phones are usually slow, therefore when you increase the height, it will increase the CPU load. On tablet devices the CPU's are faster, therefore it is recommended to set the width to higher value like 1280 and allow the device to recompute the value for height.

Because some browsers like FireFox mobile do not allow the setting of viewport after page loading, this value was set fixed into the Clients\www\software\html5.html file:

For example change it to:

to increase width and at same time height recomputed by browsers native internal logic.

As a second example, changing it to :

would break viewport area and RDP session would not fit the screen.

HTML5 Client: Parameters in URL address

When using Terminal Service Plus HTML5 client to connect to a remote server, you can specify several parameters in the URL address to override default parameters, such as:

- user login
- user password
- program to run
- startup directory for the program to run
- command line for the program to run

Run a Specific Application

Here is an example of a full URL address to open a remote session for user "demo" with password "demo" and by starting standard notepad upon session opening:

https://demo.tsplus.net/software/html5.html?user=demo&pwd=demo&program=c:\\windows\ \system32\\notepad.exe&startupdir=c:\\windows\\system32¶ms=

Please note that in the URL address all slashes characters must be repeated 4 times.

You do not have to specify all these parameters at the same time: the parameters not specified will have their default configured value.

Connect with Web Credentials

If you want to use a <u>Web Credential</u> to connect, you can pass it in an URL by adding an "@" before the Web Login.

Here is an example of a URL address to open a remote session with the Applications Panel for Web Credentials "1234" with password "demo":

https://demo.tsplus.net/software/html5.html?user=@1234&pwd=demo

Restrict this usage to Users Default Applications

You can disable the Application Command Line for users by going on the <u>Advanced —></u> <u>Session tab</u> of the AdminTool, double-clicking on the "Application Command Line" setting and setting the value to "No".

🛺 TSplus - Edit Setting	×
Application Command Line	
Description:	
Application Command Line can be specified on client side.	^
	~
Value:	
Yes	~
Course Course	
Save Cancel	

HTML5 Client: Supported Browsers

If your browser shows red warning on start by using HTML5 client

It means that your browser does not support Websockets or your browser does not support Canvas. Such browsers that do not support these technologies are IE6, IE7, IE8, IE9 and need FLASH to emulate these features.

Browsers supporting Websocket and Canvas

Browsers	Canvas	Websocket
FireFox	Full	Full starting with version 4
Chrome	Full	Full in most known versions on PC's
Opera	Full	Full in newest versions
IE6	Flash	Flash (emulated and no proxy support)
	Flash	XHR (with proxy support)
IE7	Flash	Flash (emulated and no proxy support)
	Flash	XHR (with proxy support)
IE8	Flash	Flash (emulated and no proxy support)
	Flash	XHR (with proxy support)
IE9	Flash	Flash (emulated and no proxy support)
	Flash	XHR (with proxy support)
IE10	Full	Full
Android native	Full	XHR
Opera mobile	Full	Full in newest versions
Firefox mobile	Full	Full
Safari mobile	Full	Full in newest versions up to iOS4, else emulated via XHR

If your browser automatically reloads the pages to HTTPS address

It means that Websockets transport is not supported. This is the case on several Android native mobile browsers. It is due to the fact that the browser automatically switches to XHR transport.

But because this transport layers on long distances with HTTP protocol, each request creates new connection. It is very slow and unstable to create new connections (up to 20 new connections per second), therefore to avoid this instability the program is conceived so that the page reloads automatically to HTTPS address to enforce HTTPS connection.

Physically you also get mostly persistent secured connection and much more stable on long distances. So the logic of browser reuses already established SSL connection instead of creating a new connection like by the use of HTTP protocol.

This behavior can be changed by the following option on the setting.js file located in the TSplus program folder under this path: Clients\www\software\html5\settings.js:

forcesslforxhr = false;

But it is absolutely not recommended to disable the use of SSL in XHR mode.

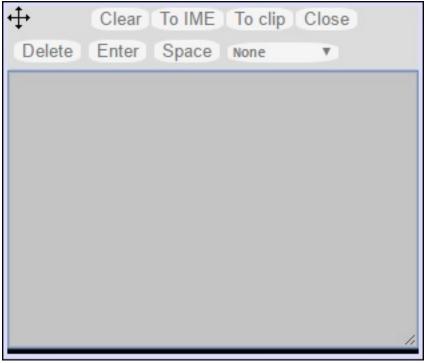
*If you do not have a file named "settings.js" in the "C:\Program Files (x86)\TSplus\Clients\www\software\html5" folder, then your TSplus version is older and this documentation does not apply. Please update your system first or contact support.

HTML5 Client: Using Clipboard

The clipboard can be found on the HTML5 Top menu, with this icon:



Most browsers except older MSIE browsers do not support the direct clipboard reading and writing due to security reasons.



To copy the text from session to clipboard use Ctrl+C and to insert the text from clipboard use Ctrl+V.

But pay attention when you copy the text with Ctrl+C, wait some time before releasing the pushed Ctrl+C buttons, because if the requested clipboard text arrives after you release this key combination, the text will not be added to your environment clipboard. This way uses a native browser clipboard copy support initiated by Ctrl+C.

Alternatively you can **use the clipboard menu** to copy from and to insert the text into RDP session clipboard.

There you can just insert the text into RDP session clipboard or add it to clipboard and auto-

initiate Ctrl+C on RDP session side to insert text. The clipboard menu can be opened via action menu or Shift + F11.

• When you copy the clipboard with mouse inside a RDP session, the text gets sent to browser and as soon as you go out of browser focus, the clipboard menu appears automatically to inform you that there was a clipboard text and that you did not add it to your clipboard environment.

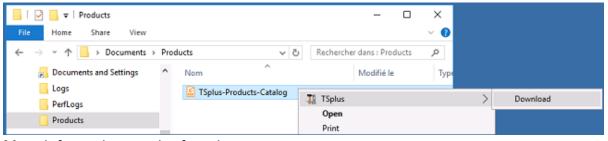
To avoid this behavior set the following line on the Clients folder, by default, the path is: C: \Program Files(x86)\tsplus\Clients\www\software\html5\settings.js :

openonclipblur = false;

*If you do not have a file named "settings.js" in the "C:\Program Files (x86)\TSplus\Clients\www\software\html5" folder, then your TSplus version is older and this documentation does not apply. Please update your system first or contact support.

HTML5 Client: Using File Transfer

File Transfer can be done in multiple ways on TSplus: since Version 12.50, **a contextual menu is available to download files from the server to the local pc**:



More information can be found on this documentation

Using the top menu for file transfer:



Unlike real RDP session the browsers do not allow to access the hard drives directly, the file transfer is emulated.

The sub-folder of gateway gets mounted as a WebFile device into your RDP session. Inside the RDP session you can access it via Explorer by clicking on "WebFile" or call "\\tsclient\WebFile" directly:

local content in the second se	d From	Server>	To your local f	PC		×
$\leftrightarrow \rightarrow \checkmark \uparrow \blacksquare$ This PC			5 V	Search This PC		P
Organize 🔻					-	0
Inis PC	^	✓ Device	s and drive	s (4)		^
Desktop						
Documents		~	WebFile on .0	KUW2A5W9THQKN		
🖶 Downloads						
👌 Music			Floppy Disk [Drive (A:)		
Pictures			Local Disk (C	:)		
Videos			37.3 GB free o	of 59.5 GB		
WebFile on .0KUW2A5W9THQKN Local Disk (C:)						
	~		CD Drive (D:)			~
File name:			~	All (*.*)		~
				Open	Cancel	
🖵 📝 📙 🚽 \\tsclient\WebFile						×
File Home Share View						~ 🕐
\leftarrow \rightarrow \checkmark \uparrow \blacksquare \ll tsclient \rightarrow \\tsclien	t\WebFi	ile	~ 0	Search \\tsclient\V	VebFile	Q
This PC	^	Name		^	Date mod	lified
Desktop		🕵 TSp	lus-solutions-fo	or-BYOD-era		
Documents						
Downloads						
Music Pictures						
Videos						
webFile on .PLNC6PQ5K9ZUO4						
🏪 Local Disk (C:)						
💣 Network		_				
1 item	*	<				>

There are 3 different possibilities to transfer a file:

• From the local computer to the server:



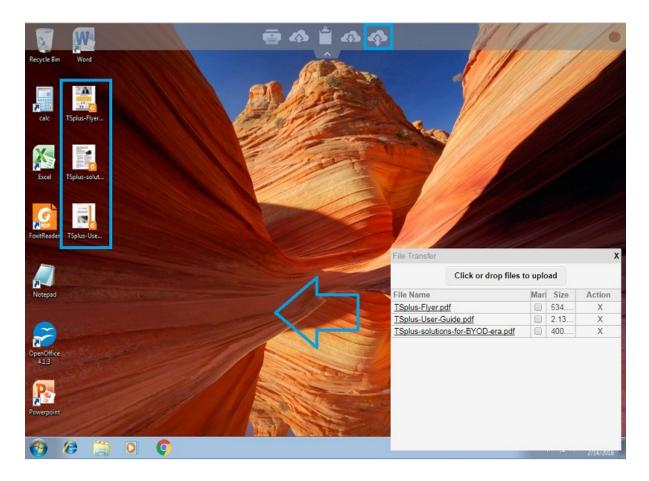
🗅 127.0.0.1/socket.io/upl — 🗆 🗙	P Open ← → ~ ↑		→ john → Documents	5 √	Search Documents	×
127.0.0.1/socket.io/uploadb?path=PLN		w folder	> John > Documents	~ 0	Search Documents	م • • • •
Click here to select your file!	This PC This PC Desktop Documents Downloads Music Pictures Videos Local Disk (C:	ľ	Name TSplus-for-Windows TSplus-get-started TSplus-solutions-for-BYOD-era TSplus-User-Guide		Date modified 3/15/2016 7:55 PM 3/15/2016 6:52 PM 3/15/2016 7:55 PM 3/15/2016 7:52 PM	Type Microsoft Word Microsoft Word Foxit Reader PDF Foxit Reader PDF
	a	✓ <	e: TSplus-get-started	~	All Files Open	> Cancel

• From the server to the local computer:

	to be tra	ansferred From Server> To your local PC			
→ × ↑ 🖺 «	Local D	isk (C:) → Users → john → Documents	✓ Č Searc	h Documents	م
Organize 🔻 🛛 New f	older				- 💷 🤅
🔒 john	^	Name	Date modified	Туре	Size
Contacts	C	TSplus-for-Windows	3/15/2016 7:55 PM	Microsoft	606 K
📃 Desktop	c	TSplus-get-started	3/15/2016 6:52 PM	Microsoft	78 K
Documents		Splus-solutions-for-BYOD-era	3/15/2016 7:55 PM	Foxit Read	401 K
🕂 Downloads		🕵 TSplus-User-Guide	3/15/2016 7:52 PM	Foxit Read	2,185 K
🔶 Favorites					
Links					
Music					
OneDrive					
-	\vee <				

• The file manager which enables you to transfer files from the local computer to the server, with an history of the transferred files:





On the browser side the files are showed inside the browser's list menu. It can be opened via action menu or with Shift + F12.

• When you copy files with Explorer into the WebFile folder, this triggers automatically the event about the creation of a new file in the WebFile folder and the browser menu opens/refreshes automatically to show the new file:

$\leftarrow \rightarrow$	C 127.0.0.1/software/html5.htm						☆ =
	🛫 🗌 🚽 📙 🗢 🛛 WebFile on .PLNC6PQ5K9ZU	04			- 0	×	
Recycle Bi	File Home Share View					 2 	
	← → → ↑ 室 → This PC → WebFile o	n .PLN	C6PQ5K9ZUO4	v ♂ Se	arch WebFile on .PLNC6PQ	Q	
G	a OneDrive	^	Name	Date mod	lified Type		
Foxit	🛄 This PC		Splus-solutions-for-BYOD-era		Foxit Reader PDF		
	Desktop						
	Documents						
_X ≣	Downloads			File transfer			X
Excel	h Music			File transfer			^
LACER	E Pictures				Click or drop files to	upload	
	Videos			File Name		Size	Action
w	🛫 WebFile on .PLNC6PQ5K9ZUO4			TSplus-solut	ions-for-BYOD-era.pdf	400.75KB	Х
	Local Disk (C:)						
Word	🔿 Network						
	Vetwork	~	<				
	Search the web and Windows		🗆 e 📃 🗃				5/10/2010
📓 TSpl	TSplus-solutions-forpdf						

When using a custom folder, make sure this folder exists on client and server sides. You can set the upload/download destination folder on the Web Portal preferences tile on the web tab of the Admin Tool:

Preferences			_ ×
Default Values			
Login:			
Password:			
Password:			
Domain:			
	Show the Doma	ain field 🔽 Rem	ember last login
Advanced			
Keyboard:	as_browser		
Access Type			
Available Clients:	🔽 HTML5 (Pad, iPhone, Android	devices, computers)
	RemoteApp (Windows PCs)	
Gateway Portal:	Generate a Gat	eway Portal enabled V	Veb Page
		-	
- Upload: Folder to selec		Download: Folder fo	
User Desktop (defa	ault)	Oser Desktop (default)
My Documents		My Documents	
WebFile folder		WebFile folder	
Custom folder:		Custom folder:	
	Select		Select
Folder path from wi select files to be up		Folder where al will be stored or	l downloaded files n the Server.
		vill be stored in the spe	
(Drag/Drop from	the user PC, Downlo	ad button or File Trans	sfer button)
Ose Explorer to select	ect files	🔘 Use TSplus GU	1
PHelp	Reset	Preview	Save Save

If you want to avoid this behavior, set the following line on the setting.js file which path is by default: C:\Program Files (x86)\tsplus\Clients\www\software\html5\settings.js :

dropboxonnewfile = 0;

Additionally you can set:

sharedfolder = "yes";

to show shared folder and share your files with other users (disabled by default).

If you do not have a file named "settings.js" in the "C:\Program Files (x86)\TSplus\Clients\www\software\html5" folder, then your TSplus version is older and this documentation does not apply. Please update your system first or contact support.

• By default, explorer is used to transfer files. You can also directly download your files from server to client by checking the "use TSplus GUI", and copy any files into the webfile folder:

Preferences					- ,	ĸ	
Login:							
Password:							
Password:							
Domain:							
	Show the Don	nain field	Remer	nber last login			
Advanced							
Keyboard:	as_browser						
Access Type							
Available Clients:	V HTML5	(iPad, iPhone	, Android de	evices, compute	ers)		
	RemoteApp (Windows PCs)						
Gateway Portal:	🔲 Generate a Ga	ateway Portal	enabled We	eb Page			
Upload: Folder to select	t files.	Download	d: Folder for	all received file	s		
Oser Desktop (defa	ult)	O User	Desktop (de	fault)			
My Documents			ocuments				
WebFile folder		<u> </u>	File folder				
Custom folder:	Select	Custo	m folder:	Selec	+		
Folder path from wh select files to be up		er where all o e stored on f	downloaded file	_			
	s from the users PC the user PC, Down						
Ose Explorer to sele	ect files	Use]	rSplus GUI				
PHelp	Reset	Q	Preview	Si	ave		

HTML5 Client: Using Gestures on mobile devices (Touch)

Using screen area:

- 1. Easy touch on screen = mouse move to touched position and left mouse click
- 2. Fast double tap on screen = mouse move to touched position and left mouse double click
- 3. Touch and hold for one second on screen = mouse move to touched position and right mouse click
- 4. Touch and move outside of cursor area = scrolling the visible session frame (this is native browsers behavior for scrolling especially after pinch-zoom)
- 5. Touch in cursor area and move = mouse cursor moving only
- 6. Double tap inside cursor area and move = left mouse down and mouse moving Useful for moving window, moving elements, resizing.
- 7. Double tap on screen(outside of cursor area) and move finger down/up = middle mouse scrolling Useful for scrolling pages or view pdf's.
- 8. Pinch zoom with two fingers = zoom the RDP session frame (this is native browsers behavior)

Using mouse pad area - additional functions in the middle point of mouse pad:

- 1. Easy touch in the middle = left mouse click
- 2. Double tap in the middle = left mouse double click
- 3. Touch and move in the middle = mouse move and mouse pad moving
- 4. Touch and hold for one second = right mouse click

Keyboard mode on:

- 1. Easy touch on screen = focus lose, keyboard disabled (this is native browsers behavior) but this will fire mouse move and left mouse click.
- Fast double tap = mouse move and left mouse click (without keyboard disabling) Useful to reposition the cursor, set focus on different character and stay at the same time in keyboard mode.
- 3. +Functions of mouse pad described above

HTML5 Client: Using two languages

By default the HTML5 client tries to recognize browsers default language and then use it inside RDP session. This behavior is controlled by tag "as_browser" However you may find the full list of available language tags in http://your_server/software/language.html under "Locale"

You have the choice to set fixed language either A: per client directly from HTML5 top menu.

	Language		Locale	Value
0	Portal		as_portal	
0	Browser		as_browser	
0	Gateway		as_gateway	
0	Arabic		ar_ar	1025
0	Arabic (Algeria)		ar_dz	5121
0	Assamese		as_as	1101
0	Azeri (Cyrillic)		az_cy	2092
0	Azeri (Latin)		az_lt	1068
0	Belarusian		be_be	1059
0	Bulgarian		bg_bg	1026
0	Bengali		bn_bn	1093
0	Tibetan		bo_bo	1105
0	Bosnian (Cyrillic)		bs_cy	8218
0	Bosnian (Latin)		bs_lt	5146
0	Catalan		ca_ca	1027
0	Czech		cs_cs	1029
0			cs_cz	1029
0	Welsh		cy_gb	1106
0	Danish		da_da	1030
0			da_dk	1030
0	German (Swiss)		de_ch	2055
0	German		de_de	1031
0	Divehi		dv_dv	1125
0	Greek		el_el	1032
0			el qr	1032
				4405

B:

or from portal by setting it in AdminTool GUI which will be effective for everyone.

- 📩 🐢	-		fr_ca
			fr_ca
	A:		en_us
			de_de
			more
		/	_ ×
Preferences	B:		- ~
Default Values			_
Login:			
Password:		/	
Domain:		¢	
Domain.	L		
	Show the Dømain field	Remember last login	
Advanced			
Keyboard:	as_browser		
Keyboard:	as_browser		

You should restart session if setting another language as main.

Remember: when using **HTML5 client** in mulitple language scenario go sure that language used inside Web-HTML5-RDP session is synchronized with the language actually set on your PC/ Laptop/Mac etc. Else some chars that are represented and crossing in every language map may produce wrong char by sending scan code actual for another language. Also that means, if you changed the language from English to German inside web-session then change it to German on PC/Laptop/Mac too.

HTML5 Client: How to maximize the browser window

Overview

The RDP protocol does not allow to resize while connected without a reconnection.

Please note that you will get the best experience possible from Terminal Service Plus HTML5 client by connecting with a maximized browser.

However, if you want to force the browser window to be as big as possible, you can try to "force" the HTML5 window to open with the maximum size (but not as a "maximized" window, due to internet browsers security limitations).

Maximizing the browser window

You will have to modify the file "Clients\www\software\common.js" located in your Terminal Service Plus directory. We advise you to use a text editor such as Notepad++ (do not use Word).

In order to have a browser window which uses all the screen, you will have to modify the line(s) with "window.open" in it, and add the following text:

"screenX=0,screenY=0,left=0,top=0,fullscreen=yes,width="+(screen.availWidth-5)+",height="+(sc reen.availHeight-(55))

This allows IE/Chrome/Firefox/Safari to open the window with a screen size (minus Windows bar). Unfortunately it is not possible to force a web browser to "maximize" the window in a "fullscreen" Windows type.

Open the file and search "window.open("

Then add the new at the end before the brackets, for example:

window.open(hostGateway + jwtsclickLinkBefore(getside(), p), window.opforfalse);

will become:

```
window.open(hostGateway + jwtsclickLinkBefore(getside(), p), window.opforfalse,
"screenX=0,screenY=0,left=0,top=0,fullscreen=yes,width="+(screen.availWidth-5)+",height="+(sc
reen.availHeight-(55)));
```

And again:

```
tmpwin = window.open(p, '_blank'); //Chrome needs _blank
```

will become:

```
tmpwin = window.open(p, '_blank',
"screenX=0,screenY=0,left=0,top=0,fullscreen=yes,width="+(screen.availWidth-5)+",height="+(sc
reen.availHeight-(55))); //Chrome needs _blank
```

And again:

success = window.open(p, k);

will become:

And finally :

```
cpwin = window.open("about:blank", n);
```

will become:

```
cpwin = window.open("about:blank", n,
"screenX=0,screenY=0,left=0,top=0,fullscreen=yes,width="+(screen.availWidth-5)+",height="+(sc
reen.availHeight-(55)));
```

HTML5 Server Memory Usage

Terminal Service Plus HTML5 Server runs on JAVA. Understanding how JAVA handles memory help to understand Terminal Service Plus HTML5 Server memory usage.

Assigned memory

When Java runs, it tries to allocate 25% of the computer physical memory. This memory is "assigned" but not directly used - it is not the real memory usage that one can see in Windows Task Manager.

JAVA platform: 32-bit vs 64-bit

There is one big difference between these two platforms:

- JAVA 32-bit cannot handle more than 4GB of RAM by definition. Since it will allocate 25% of all available memory, it will allocate at most 1GB, assuming there is 4GB physical memory. If there is only 2GB physical memory, it will only allocate 500MB, etc.
- JAVA 64-bit can handle a lot more than 4GB (theoretically up to 16 exabytes), so the allocated memory will only depend on physical memory.

JAVA memory management

JAVA is a "virtual machine". It means that JAVA handles memory management on its own. Once JAVA allocates some memory, even when it does not need it anymore, it will not automatically give it back to the system. This is for performance reasons, as memory allocating and deallocating are CPU intensive tasks.

JAVA will usually wait until it has a big chunk of unused memory before giving it back to the system. The size of this big chunk directly depends on the size of the computer physical memory. The more physical memory on a computer, the more memory is allocated by JAVA.

Terminal Service Plus HTML5 Server Memory Usage

All these technical details are the reason why one can open Windows Task Manager and think that Terminal Service Plus HTML5 Server uses a lot of memory, or that JAVA 32 bit uses less memory than JAVA 64 bit.

Actually, the memory really used by Terminal Service Plus HTML5 Server is directly related to

the number of opened HTML5 sessions. The more available memory on the computer, the more HTML5 sessions you can open.

HTML5 Session Memory Usage

The memory used by an HTML5 session depend on the user activities (applications and programs used, Word/Excel versus drawing-intensive programs) and the connectivity method established between the Terminal Service Plus HTML5 Server and the client computer.

In the general use case, an HTML5 session will use 30 MB of memory (standard use, binary websockets connectivity). In the worst case, a session will use up to 100 MB of memory (intensive use, "XHR" fallback connectivity for older browsers).

Certificates and Certification process

1. Certification Process

The certificates are delivered by the Certificates Authorities (CA). This is a 3-step process.

a. The generation of a Key Pair or Private Key in standard RSA 2048 bits. This key will be used to generate a CA Request based on it.

b. The CA Request generated is transmitted to the CA. It contains all the necessary information in order for the provider to deliver a certificate (Country Name 2 letters code, State or Province Full Name, Locality Name, Organization Name e.g. Company, Organization Unit Name e.g. Section, valid email address and Common Name (CN) e.g. MyDomainName.com).

c. The Certificate authority verifies the information you transmitted and returns the certificate, and eventually also intermediate certificates that are required to access your certificate. The certificate also contains the CA Reply (the validated Private Key). Once you have the certificate, the CA reply, its key pair (private key), and the intermediates certificates, they must be imported in the key store handled by Terminal Service Plus.

2. The Certificates

The delivery usually contains several files. Each file is a certificate. As said previously, the authority delivers the certificate of your Domain name and intermediate Certificates that are mandatory to access to your certificate.

The common format file is .cer or .crt. These extensions are recognized by the OS which associates the certificate lcon.

Organize Include in library Share with New folder					
	Name	Date modified	Type ^		
Computer	📄 cert.jks	30/03/2015 20:08	JKS File		
Local Disk (C:)	尾 portecle	23/07/2012 02:26	PNG image		
My Web Sites on MSN	AddTrustExternalCARoot	30/05/2000 10:48	Security Certificate		
🙀 Network	COMODORSAAddTrustCA	30/05/2000 10:48	Security Certificate		
T	COMODORSADomainValidationSecureServerCA	12/02/2014 00:00	Security Certificate		
	🕎 MyDomainName	29/03/2015 00:00	Security Certificate		

In our example above, we received 4 files (.crt). The first, second and third are intermediate certificates (CARoot, TrustCA, DomainValidationCA). The fourth is our Certificate which certifies our domain name MyDomainName.crt. They all have to be installed together.

For a better understanding of how to proceed, let's examine the certificates.

3. Certificates Properties

The properties of the certificate CA Root show its path. Each certificate has a path from the root to the certificate of your domain name.

Certificate 🛛 🗙
General Details Certification Path
Certificate Information
This certificate is intended for the following purpose(s):
 Ensures the identity of a remote computer Proves your identity to a remote computer Protects e-mail messages Ensures software came from software publisher Protects software from alteration after publication Allows data to be signed with the current time
Issued to: COMODO RSA Certification Authority
Issued by: AddTrust External CA Root
Valid from 30/ 05/ 2000 to 30/ 05/ 2020
Learn more about certificates
ОК

Certificate 🛛 🗙
General Details Certification Path
Certification path
USERTrust COMODO RSA Certification Authority
View Certificate
Certificate status:
This certificate is OK.
Learn more about <u>certification paths</u>
ОК

Certificate	×
General Details Certification Path	
Certificate Information	
This certificate is intended for the following purpos	se(s):
Ensures the identity of a remote computer Proves your identity to a remote computer Z.1	
* Refer to the certification authority's statement for details	;
Issued to: www.standing.com	
Issued by: COMODO RSA Domain Validation Secure CA	e Server
Valid from 29/ 03/ 2015 to 29/ 03/ 2016	
, Install Certificate Issuer Learn more about <u>certificates</u>	Statement
	ОК



The properties of our certificate show all the general informations about the certificate (purposes, addresses, issued to CN), issued by and validity. What is important to notice is the certification path. It includes the entire path needed to access our certificate. It displays all the intermediate certificates that are included inside ours.

This is a simple process. You must import this entire certification path, plus the Key Pair in the Terminal Service Plus Key store file.

Use Windows certificate manager to import keypair and all certificates into Windows keystore as described in Certificates and Certification process (make keypair exportable when importing!) and then export that key back from Windows keystore by checking the option "Include all certificates in the certification path if possible". For the format choose per example *.p12 Now create a new keystore in JKS format on Portecle, and go to Tools>Import Key Pair and import that *.p12 file:

TSPLUS	Remote Access Management Console		
HOME APPLICATIONS PRINTER	Generate a free valid HTTPS certificate		
WEB	C:\Program Files (x86)\TSplus\Clients\webserver\key* - Portecle	878	×
HTTPS	File Iools Examine Help C C C C C C C C C C C C C C C C C C C		
Web Server	Alias Name Last Modified key.p12		
SESSIONS			
SYSTEM TOOLS			
ADVANCED			
ADD-ONS			
	Keystore type: PKCS #12, provider: BC, size: 1 entry		 _

4. Important notice about the Key Pair (Private Key)

The key Pair is the RSA 2048 Bit key generated for the CA Request of the certificate. It has been generated either in the Portecle add-on we provide, or with another available generator like openssl, IIS, online sites, or CA provider's applications.

You must keep this Private Key. It is either a flat file text format unsecured .pem or a secured format .p12 or .pfx. The Private Key generated is mandatory to be able to generate the certificates correctly.

Back to HTTPS, SSL & Certificates Tutorial Summary

How to do a CA Request and Get a Certificate

As a reminder, here is the certification process explained. This process can be done either in the Portecle add-on we provide, or with another generator available like openssl, IIS, online sites, or CA provider's applications.

1. Reminder - Certification process

The certificates are delivered by the Certificates Authorities (CA). This is a 3-step process.

a) The generation of a Key Pair or Private Key in standard RSA 2048 bits. This key will be used to generate a CA Request based on it.

b) The CA Request generated is transmitted to the CA. It contains all the necessary information to the provider to deliver a certificate (Country Name 2 letters code, State or Province Full Name, Locality Name, Organization Name e.g Company, Organization Unit Name e.g Section, valid email address and Common Name (CN) e.g. MyDomainName.com).

The main job consists in creating the Request which will correctly inquire a form asking for all the information listed above.

c) The Certificate authority verifies the information you transmitted and returns the certificate, and eventually also intermediate Certificates that are required to access your certificate. The certificate also contains the CA Reply (the validated Private Key). Once you have the certificate, the CA reply, its key pair (private key), and the intermediate certificates, they must be imported in the keystore handled by Terminal Service Plus.

2. How to generate a CSR (Certificate Signing Request)

In this tutorial, we will learn how to install a certificate in the Terminal Service Plus Web Server, providing users the security of HTTPS, 2048 SSL encryption and Domain name certification. In order to receive an SSL Certificate we recommend you purchase it from a trusted vendor as GoDaddy or DigiCert. Please follow the this procedure to order and install your SSL on the

TSplus Gateway / Server.

To create a CSR with the DigiCert Utility, follow the steps below:

- 1. On your Windows Server, download and save the <u>DigiCert Certificate Utility for Windows</u> executable (**DigiCertUtil.exe**).
- 2. Run the DigiCert Certificate Utility for Windows (double-click DigiCertUtil).
- 3. In the **DigiCert Certificate Utility for Windows**[©], click **SSL** (gold lock), and then click **Create CSR**.

٥		DigiCert Certific	ate Utility for Wind	ows©	_ _ ×
G digi cer	t [°] certi	FICATE UTILITY f	or Windows®	-	00.896.7973
SSL C	ertificates			Create	CSR 1 Import C Refresh
Issued T	o	Expire Date	Serial Number	Friendly Name	Issuer
SSL localhost	t	10-SEP-2014	05	localhost	DigiCert, Inc.
testsite		10-SEP-2014	04	testsite	DigiCert, Inc.
Code Signing Tools					
Version 2.3.7					Close

4. On the

Create CSR

page, provide the following information below and then click **Generate**

Certificate Type: Select **SSL**. **Common Name**: Enter the fully-qualified domain name (FQDN) (e.g., <u>www.example.com</u>). **Subject Alternative Names**: If you are requesting a Multi-Domain (SAN) Certificate, enter any SANs that you want to include (e.g., <u>www.example.com</u>, <u>www.example2.com</u>, and <u>www.example3.net</u>). **Organization**: Enter your company's legally registered name (e.g., YourCompany, Inc.). **Department**: (Optional) If you want, enter the name of your department within the organization or you can simply leave the box blank. **City**: Enter the city where your company is legally located. **State**: Use the drop-down list to select the state where your company is legally located. **Note**: If your company is located outside the US, you can type the applicable name in the box. **Country**: Use the drop-down list to select the country where your company is legally located. **Key Size**: In the drop-down list, select **2048** (unless you have a specific reason for using a larger bit length). **Provider**: In the drop-down list, select **2048** (unless you have a specific reason for using a larger bit length). **Provider**: In the drop-down list, select **2048** (unless you have a specific reason for using a larger bit length). **Provider**: In the drop-down list, select **2048** (unless you have a specific reason for using a larger bit length). **Provider**: In the drop-down list, select **2048** (unless you have a specific reason for using a larger bit length). **Provider**: In the drop-down list, select **2048** (unless you have a specific reason for using a larger bit length). **Provider**: In the drop-down list, select **2048** (unless you have a specific reason for using a larger bit length). **Provider**: In the drop-down list, select **2048** (unless you have a specific reason for using a larger bit length).

۵	DigiCert Certificate Utility for V	/indows© ×
Create C	SR	
Certificate Det	ails	Information
Certificate Type:	● SSL ○ Code Signing	Cancel
Common Name:	www.example	Press Cancel to cancel creating a new key and CSR.
Subject		
Alternative Names:		
	×	
Organization:	Your Company	
Department:	Π	
City:	Your City	
State:	Your State V	
Country:	USA V	
Key Size:	2048 🗸	
Provider:	Microsoft RSA SChannel Cryptographic Provider	
	Generate	

6. On the

DigiCert Certificate Utility for Windows© - Create CSR page

, do one of the following and then click **Close**

:

Click Copy CSR. Copies the certificate contents to the clipboard. Use this option if you are ready to paste the CSR into the DigiCert order form. **Note**: Because the DigiCert Certificate Utility does not store CSRs, we recommend you paste the CSR into a text editor (such as Notepad) when using this option. If you close the CSR page and accidentally overwrite the clipboard contents without doing this, you will need to generate a new CSR.

Click **Save to File**. Saves the CSR as a .txt file to the Windows Server 2012. (We recommend using this option.)

DigiCert Certificate Utility for Windows© - Create CSR
The certificate request has been successfully created.
BEGIN NEW CERTIFICATE REQUEST MIICtTCCA20CAQAwcDELMAkGA1UEBhMCVVMxEzARBgNVBAgTCllvdXIgU3RhdGUx EjAQBgNVBAcTCVlvdXIgQ210eTELMAkGA1UECxMCSVQxFTATBgNVBAoTDFlvdXIg Q29tcGFueTEUMBIGA1UEAxMLd3d3LmV4YW1wbGUwggEiMA0GCSqGSIb3DQEBAQUA A4IBDwAwggEKAoIBAQCrDlCrkgIfxnAl+40DfJeBB3r0S7VgSFueFvyHPQmYdyoL f6pbg1329yx5k89bZ/orXk2gCq4kPZNMAhqT2GObydrPSauN96CGR8ZqK/jcMZfL 2k8hFxQbe1pCX8rEHoXNaQm8pJrR02+HdF/qPekxJxA+iKqEA9yDpd+pO13E/BRr Xe9MV9dcjir6cTVnC5jwXuiSrFWakuQQb1x1CRqCocy/kAUFgBvYe+4rw2+54k1T v1NeRjlacUIcpydZAIGTysyeX3oiHKX1p7GPVFht8GPKnnd84FqJVNhFN03wr7cg 6HenrtWP/+PgD/Wz/BkZ0yzFo9czTy5n9d/AvC6rAgMBAAGgADANBgkqhkiG9w0B AQUFAAOCAQEAR/WsB11SHeB1dTe9iiNEKcGLr6XH9rgh7P0+PdWDe70kmL497AMc bsrpDOKbPOmsXaPf2kocvsGUJD2clkGVOKHYz6tiU6f4vBsSpJXHvHfQwAreJNSn zgGHsxLaJmLmXveabOLyv6W1LEQIcJLq7RRRdnC7vKNt7RkngBADgo+uQfpySuw WgpBT22AuIIImJ4zDV1isarb7hUa+eLqjzKmuBaAS3916A4yhhMt2YQseJ5WKF2N bmWe7QvfLoXbE19tYk4WjqIN4gBk1/iebzmVjuM7aRN6vU1fftwBxpOYXOXtYCHT Fx+dz8JpCY39EfRU11AEeohB37n68oF4g== END NEW CERTIFICATE REQUEST
Copy CSR Save to File Close

7.

Use a text editor (such as Notepad) to open the file. Then, copy the text, including the -----BEGIN NEW CERTIFICATE REQUEST----- and -----END NEW CERTIFICATE REQUEST----tags, and paste it into the DigiCert order form.

8.

After you receive your SSL Certificate from DigiCert, you can use the DigiCert Certificate Utility for Windows to install it.

3. How do I generate what I need for TSplus?

1. Open the DigiCert Application a) click on SSL b) Import your SSL You will now see the cert that you have installed is highlighted:

🖸 DigiCert Certificate Utility for Windows®					
G dig	i cert <i>CERTIFICAT</i>	TE UTILITY fo	r Windows®		0.896.7973 gicert.com
	SSL Certificates			Create CSR	▲ Import C Refresh
	Issued To	Expire Date	Serial Number	Friendly Name	Issuer
SSL	3.com	22-MAY-2018	00A2989B14691CE400		GoDaddy.com, Inc.
	s.com	20-DEC-2017	0ACF0FEFC40468324D27		DigiCert Inc
1 (V)	"ultrans	000.00	2008000	Partners .	E.
Code Signing					
Tools					
Account					
			Export C	ertificate Test Key	View Certificate
Version 2.3.7					Close

On the bottom of the GUI you will see the button "Export Certificate", click on it.

🚺 Di	igiCert Certificate Utility for Windows©
C	Certificate Export
Cei Yo a c	 is wizard will export a certificate and optionally its private key from the ertificate store to disk. ou must select the private key option if you wish to install this certificate on different computer. io you want to export the private key with this <u>Y</u>es, export the private key <u>P</u>es, export the private key <u>P</u>es, file Include all certificates in the certification path if possible <u>N</u>o, do not export the private key
	< <u>B</u> ack <u>N</u> ext > Cancel

Ensure that "Yes, export the private key and pfx file / Include all certificates in the certification path if possible are checked off.

Next, Save the file in the folder with the certs that you have unzipped.

You MUST USE THE PASSWORD 'secret'.

4. How do I install the certs on the the TSplus Web Server?

- 1. Copy the un-ziped file which now contains .pfk and crt files to the TSplus Server Program Files (x86)\TSplus\Clients\webserver
- 2. Make a copy of the cert.jks
- 3. From the TSplus Admin Console / Web / HTTPS / HTTPS Certificate Toolkit / File / Open Keystore File "cert.jks" Password is secret Delete the jwts Tools Import Key Pair (you will find it in the folder you have just copied) When prompted for the Alias name it must be

jwts and the password secret

Tools Import Trusted Certificate and import the crt that you have in the folder. Close the tool and ensure that the cert.jks is saved with the password secret. TSplus Admin Console / Web and restart the services. You have now completed the SSL Cert procedure.

🕻 TSplus - Admi	nistration Console		
TS	Remote Access Management Console		
д номе			
APPLICATIO	Generate a free valid HTTPS certificate		
	NTTPS Certificate Toolkit		
WEB	C:\Program Files (x86)\TSplus\Clients\webserver\cert.jks - Portecle		×
Web Portal	File Tools Examine Help		
HTTPS			
Web Server	Image: Constraint of the state of	PM CEST	
FARM			
SESSIONS			
SYSTEM TO	15		
ADVANCED			
公 ADD-ONS	Keystore type: JKS, provider: SUN, size: 1 entry		
	C.		

Back to HTTPS, SSL & Certificates Tutorial Summary

Trouble shooting

1. I received only one file (.crt or cer) which contains MydomainName.com Certificate

Look at the path in the certificate properties. If your certificate is at the root, then you don't have any intermediate certificate. You must only import the .cer ou crt you received.

If the path contains others intermediates certificates, then they will be needed. You can export theses certificates included in yours and create a file by certificate.



You can export each certificate listed in the path and get one file per certificate.

Double click on the certificate you want to export. Then go to Details / Copy to file.

Certificate Export Wizard



X

OER encoded binary X.509 (.CER)
C Base-64 encoded X.509 (.CER)
C Cryptographic Message Syntax Standard - PKCS #7 Certificates (.P7B)
\square Include all certificates in the certification path if possible
C Personal Information Exchange - PKCS #12 (.PFX)
\square Include all certificates in the certification path if possible
\square Delete the private key if the export is successful
Export all extended properties
C Microsoft Serialized Certificate Store (.SST)

Click next. Default values are ok. Click next until you have to give a name. Confirm your exportation. The result is a file .cer containing only the certificate exported. Repeat this exportation for each level of the path.

2. My private key is .pem. I cannot import my private key in Portecle

You can convert your .pem in pfx format with Tools or online sites. For example, on this site: <u>https://www.sslshopper.com/ssl-converter.html</u>

You must have your Private Key and your certificate (e.g. MyDomainName.com)

Browse to select the certificate to convert and the Private Key that goes with it. Current certificate type is PEM. Type to convert to is PFX (PKCS#12). As .pfx is a secured format, you must enter a password. You can choose whatever you want, but, at least, you will have to set it to 'secret'. So you should enter the password 'secret'.

The result is a .pfx format that you will be able to import in Portecle. As we saw in the installation section, this Private Key imported in Portecle must receive a CA Reply. See section Installation / CA reply for further information.

SSL Converter

Use this SSL Converter to convert SSL certificates to and from different formats such as pern, der, p7 and pfx. Different platforms and devices require SSL certificates to be converted to different formats. For example, a Windows server exports and imports .pfx files while an Apache server uses individual PEM (.crt, .cer) files. To use the SSL Converter, just select your certificate file and its current type (it will try to detect the type from the file extension) and then select what type you want to convert the certificate to and click Convert Certificate. For more information about the different <u>SSL certificate</u> types and how yor can convert certificates on your computer using OpenSSL, see below.	r
Certificate File to Convert: Browse_ MyDomainName_com.ort	You have chosen to open:
Private Key File: Browse_ private key.pem	MyDomainName_com.pfx which is: pfx File (2.9 KB) from: https://www.sslshopper.com
Chain Certificate File (optional): Browse. No file selected.	What should Firefox do with this file?
Chain Certificate File 2 (optional): Browse. No file selected.	C Open with Browse
Type of Current Certificate: Standard PEM Detected type from file extension	Save File Do this gutomatically for files like this from now on.
Type To Convert To: PFX/PKCS#12	
PFX Password:	OK Cancel
A Your private key is intended to remain on the server. While we try to make this process as secure as possible by using SSL to encrypt the key when it is sent to the server, Convert Certificate	

3. HTTPS errors

SSL error no cypher overlaps.



The Private Key or the Key Pair has not been imported in cert.jks or is invalid. Other errors types give the same screen with another error code. Take a look at this code error. It concerns the certificate and something with it that goes wrong. It is usually because one of the fields of the certificate is not valid or blank. Have a look to your certificate Properties and Request. Verify that all the fields are correct. Report to section how to do a Request for more information.

4. Notice concerning Terminal Service Plus and Microsoft IIS web server

Please refer to our documentation about using IIS with Terminal Service Plus

However, here is some important information about IIS and certificates:

When using IIS, the certificate has to be installed in the keystore cert.jks. This must be done in the same way as if we were using Terminal Service Plus Web Server, and as described in the previous chapter.

Don't bind the 443 HTTPS port IN IIS, as this is the Terminal Service Plus Web server that handles the HTTPS protocol, the certificate and its encryption. Not any bind has to be created on port 443. So, IIS must only have port 81 bound.

We are free to use IIS Request Tool to create the Private Key and the CA Request. It is simple to export the Private Key from IIS (IIS/Default site/Certificates) in the .pfx format and import it in cert.jks as described in the previous chapter.

Back to HTTPS, SSL & Certificates Tutorial Summary

HTTPS & SSL Certificates Tutorial

Terminal Service Plus HTTPS & SSL Features

The Web Server included with Terminal Service Plus can manage HTTPS protocol, SSL encryption with either self-signed certificate or CA certificate delivered by a Certificate Authority (CA).

The HTTPS protocol encrypts the communication between the client and the server.

The unique certificate, generated from a 2048 Bits RSA key, includes the encryption key and the certification of the Server or the Domain Name on which the user is connected.

The user is informed that the communication is encrypted and the Server or Domain name is certified by a Certification Authority. This information appears in the address bar of the navigator, as a green padlock.



In this tutorial, we will learn how to install a certificate in the Terminal Service Plus Web Server, providing users the security of HTTPS, 2048 SSL encryption and Domain name certification.

In order to receive an SSL Certificate we recommend you purchase it from a trusted vendor as <u>GoDaddy</u> or <u>DigiCert</u>.

Please follow this procedure to order and install your SSL on the TSplus Gateway / Server.

Tutorial Content

1.

Certificates and Certification process

1.

Certification Process

2.

The Certificates

3.

Certificates Properties

4.

Important notice about the Key Pair (Private Key)

2.

How to do a CA Request and Get a Certificate

- 1. Reminder Certification process
- 2. How to generate a CSR (Certificate Signing Request)
- 3. How to get a SSL Cert
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3.

Trouble shooting

1.

I received only one file (.crt or cer) which contains MydomainName.com Certificate

2.

My private key is .pem. I cannot import my private key in Portecle

3.

HTTPS errors

4.

Notice concerning Terminal Service Plus and Microsoft IIS web server

Note: You can use this <u>SSL Server Test tool</u> in order to validate the good quality of a web portal in HTTPS.

How to identify your TSplus Edition

On the License Tile under the Serial Number, you can see the type of License you purchased as well as your number of users next to the number of connections:

👖 TSplus - Administration Console	- 5585.4°	-	\times
TSPLUS	Remote Access Management Console		
 MOME APPLICATIONS PRINTER WEB FARM SESSIONS 	Oracle Activate your License Upgrade Edition or Add Users License Status Oracle License Activated - Enterprise edition - 25 users Image: Serial Number: Image: Serial Number: Image: End of support date: Image: Serial Number:		
SYSTEM TOOLS			
값 ADD-ONS	Editions System Edition		
ତିନ୍ଦ LICENSE	Printer Edition Mobile Web Edition Enterprise Edition		

TSplus has merged old licenses into one in order to gain more clarity. System and Printer editions have migrated to **Desktop Edition**.

The **Desktop Edition** has the basic features:

TSplus Administrator Tool (AdminTool),

Concurrent connections support,

•

•

Application Control per user and/or per groups,

- TSplus Remote Taskbar and/or TSplus Floating Panel,
- Remote Desktop access,
- TSplus Portable Client Generator,
- RemoteApp and Seamless connection clients,
- Fully compliant with RDP protocol,
- Dual Screen support, bi-directional Sound, RemoteFX when compatible with Windows version,
 - Local and Remote connection support,
- Workgroup and Active Directory users support,
- Device/Disk redirection.
- •

Virtual Printer, enables you to print from any location, without having to install any specific driver and allows printer redirection.

The Mobile Edition enables you (in addition to all the System and Printer editions features) to:

- Connect from any web browser with TSplus HTTP Web Server,
- •

Entirely secured connection from any web browser with TSplus HTTPS Web Server and SSH server,

•

HTML pages includes Windows and HTML5 web access clients,

•

Easily connect from iPhone/iPad and Android devices, also with the <u>TSplus Mobile App</u>,

Customize logon web page with TSplus easy-to-use Webmaster Toolkit,

•

With TSplus Web Applications Portal, users can access their application list inside their web browser,

•

Instead of Windows Credentials, TSplus Web Credentials allows users to connect with only an e-mail or a pin-code,

•

Universal Printer enables you to print from any location, without having to install any specific printer driver,

The Enterprise Edition includes all of the previous features plus these ones:

•

Support an unlimited number of servers within each TSplus Farm (requires one license per server),

•

Thousands of users working concurrently on a scalable Load-Balanced architecture,

- Single Enterprise Portal to access all your TSplus servers,
- •

Ability to assign one or several Application Server(s) to users or groups of users,

- Load Balancing and Failover support included.
- •

The Possibility to add an extra-layer of security with the <u>TSplus 2FA Add-On</u>.

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Terminal Service Plus Installation

Run <u>Terminal Service Plus Setup program</u> and then follow the installation steps.



You can then select two custom options by ticking the corresponding boxes :

- Use custom proxy settings.
- Only download setup, which does not install TSplus.

Click on next.

🐻 Setup - TSplus	_		×
Advanced Setup Options Specify advanced setup options below.		Г	
		ų	5
If any doubt, simply click Next to continue setup.			
Use custom proxy settings			
Only download setup (do not install)			
< <u>B</u> ack <u>N</u> ex	d >	Can	icel

Click on "I accept the agreement".

🐻 Setup - TSplus — 🗆	×
License Agreement Please read the following important information before continuing.	R.
Please read the following License Agreement. You must accept the terms of this agreement before continuing with the installation.	
ïFSplus's license agreement	^
Software You should carefully read the following terms and conditions before opening the software package, or if downloaded, before using such downloaded software. Opening the package or using the software, if downloaded, means you accept these terms and conditions and understand that they will be legally binding on you and TSplus. If you do not agree with these terms and conditions, or do not want them to be binding on you, you should promptly return the package unopened for a full refund or delete the downloaded software from any storage medium that it is stored on.	¥
I accept the agreement	
○ I <u>d</u> o not accept the agreement	
<u>N</u> ext > C	ancel

Web servers are listening on ports 80 and 443 by default. We recommend you to accept our TSplus default installation settings. According to our experience, most of the production issues are due to Windows security features.

You can still modify these ports if you wish during installation or at any time on the <u>Built-in Web</u> <u>Server Management of the AdminTool</u>. Just make sure that the defined ports are available and that Java is installed on the server.

Setup - TSplus		_	
TSplus WEB options			R
-> HTTP web server and Unive -> HTTPS web server with Tur -> Highly secured SSH commu -> RemoteAPP client to start V -> Gateway and Web Portal. -> HTML5 client access from iP	nneling. nication with Tunneling. /irtual Application over Internet.		
Change port numbers	Disable HTTP built-in web server		
HTTP: 30	• Use the built-in HTTP web se	rver	
HTTPS: 443	O Disable the HTTP web server		
	< <u>B</u> ack <u>N</u> e	xt >	Cancel

The progress bar appears and allows you to follow the progress of the process:

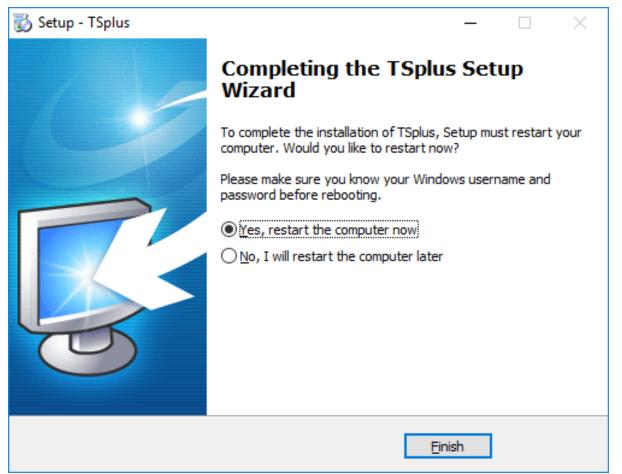
🐻 Setup - TSplus	_	□ ×
Ready to Install Setup is now ready to begin installing TSplus on your computer.		B
Click Install to continue with the installation.		
< <u>B</u> ack I	nstall	Cancel

• Since TSplus 11.40 version, you will have the choice to install <u>TSplus Advanced Security</u>, our powerful Security Add-On, in its Ultimate trial version (All Security features free to use for 2 weeks) to your TSplus system:

🐻 Setup - TSplus	_	
Installing Please wait while Setup installs TSplus on your computer.		R
Finishing installation		
		Cancel

For more information about this product, see pages about TSplus Advanced Security <u>documentation</u>.

Then the TSplus logo appears and a window informs you about the completion of the installation.



To use TSplus, you must reboot your system. The trial period delivers a full product for 15 days and 5 concurrent users.

Load Balancing Feature

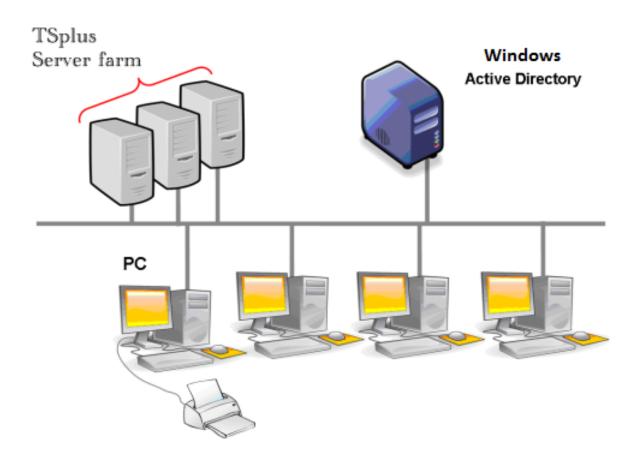
Pre-requisites

Using this feature, you will be able to manage a load balanced environment.

It means that the load of all your users will be distributed between your servers. The workload will be shared between all the servers of your farm.

Load Balancing enables to use an unlimited number of servers with load balancing, and is available with the Enterprise edition (one valid license per server). This very powerful and advanced capability is to be used when a large number of users/servers has to be deployed.

Warning : Load Balancing is not compatible with the Gateway Feature (allowing you to assign servers to users/groups, see <u>this documentation</u> for more information.)



Usually we recommend using one server for 50 concurrent users. For standard commercial

application written in VB, C, C++, Delphi or Uniface you can go up to 100 concurrent users especially if you decide to use XP 64-bit which, according to our experience, tops most operating systems delivered by Microsoft. XP or Windows 7 are much more stable operating systems. For W7, we recommend to use the 64-bit version.

Generated Clients and Web Access

There are three ways to connect to a Load Balanced cluster:

- Using a Generated Client (executable program, created by the Portable Client Generator)
- Using a **Web Portal Access** by activating it on the Web Portal Preferences window.
- With the <u>TSplus App</u> from your mobile device.

Load Balancing Main Window

The Load Balancing Manager can be found under the Farm Tab of the AdminTool:

Т Д Т:	Splus - Administration Conso	le
	TSPLUS	
ŵ	HOME	^
	APPLICATIONS	
₽	PRINTER	
0	WEB	
₽	FARM	
	Manage	
	Reverse-Proxy	
	Load Balancing	
	Assigned Servers	
8	SESSIONS	
Z	SYSTEM TOOLS	
鐐	ADVANCED	
ස	ADD-ONS	
© 7	LICENSE	~

The main window allows you to configure Load Balancing. It lists all the servers in your Load Balanced server farm, and allows you to add a new server (by clicking on the "Add a new Server" button) or displays an existing server (by clicking on it). It also allows you to enable, disable and configure the Load Balancing (more on this below).

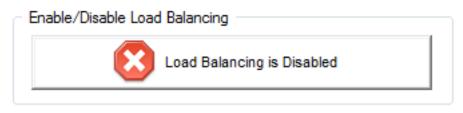
Click on the buttons in the picture below to access the corresponding information:

Enabling/Disabling Load Balancing

On top of the Load Balancing window, you will see a big button:

- This button displays the current state of the Load Balancing.
- If you click on it, it will enable or disable the Load Balancing depending on its current state.

Here is the button when the Load Balancing is **Disabled**. A click on it will activate it and disable the <u>Users/Servers Assignment</u>.



Here is the button when the Load Balancing is **Enabled**

. A click on it will deactivate it and enable the Users/Servers Assignment

٦	Enable/Disable Load Balancing
	Load Balancing is Enabled

How does Load Balancing choose a server?

When Load Balancing is enabled, the user will be sent to the less loaded server at the time of his connection.

Configuring the Computation of Servers' Loads

To determinate which is the less loaded server, the load of every server is computed using a weighted average between several performance indicators:

- number of connected users
- processor usage
- memory usage
- disk usage

You can modify the weight (importance) of these indicators by using the following sliders:

C Load Bala	incing Weights					
Users:	0%	100%	Memory:	0%	100%	
	50%			70%		Back to Default Settings
CPU:	0%	100%	I/O:	0%	100%	-
	20%			30%		

Using these sliders, you will be able to fine-tune the Load Balancing, and to optimize it to your own needs. For instance if your users launch a business application with big memory requirements, it might be a good idea to increase the impact of the RAM in the load computation using the "Memory" slider.

You can also reset these values by clicking on the "Back to Default Settings" button.

How is Server's Load computed?

The load of each server is computed when needed in order to decide on which server the user must be sent.

For this computation, we use a **weighted average** between 4 hardware metrics.

The 4 sliders allow you to give more (or less) weight on each of these metrics, which are:

- Users : number of connected users
- CPU : percentage of non-idle processor time
- Memory : percentage of used memory
- I/O : percentage of non-idle disk time

For example, if you put the "Memory" slider on its right side and all the other sliders on their left side, the load of each servers will be computed using almost only the percentage of used memory - and your users will be sent to the server having the most available memory.

- When a slider is completely on the left, the weight used in load computation will be 1.
- When a slider is completely on the left, the weight used in load computation will be 100.

Moreover, the load of a given server depends on the ratio [used resources / total resources] ; so if a server A is twice as powerful as a server B, twice more users should be sent to server A than to server B (all other things being equals).

Adding a new Server

To add a new server, simply click on the "Add a new Server" button. The following window will be displayed:

루 Add a new Serv	rer 🚬 🚬
Display Name:	US1
Server Address:	
http • ://	terminalserviceplus.ddns.net : 80
Please use your serv	ver's web server protocol, IP and port.
RDP Port: Sp Sp Sp RDP Port: RDP Port:	ame as web pecific:
V Server is Enable	d
Cancel	Save

- The "Display Name" is the title that will be shown to your users on the Web Access HTML page. It is supposed to be more user-friendly than a technical value (such as an IP), for instance "US Server" or "Blue Zone".

•

The server address is reachable with http or https ports.

•

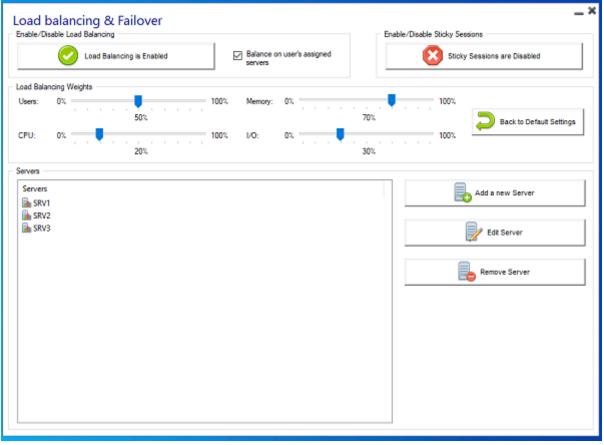
When using Load Balancing, the "RDP Port" will not be used. It is only used when connecting using a Generated Client. We advise you to keep the default setting ("Same as web").

•

You also have the possibility to enable or disable the server.

Load-balance only on user's assigned servers

Load-balancing can also be done directly on user's assigned server using the checkbox "Balance on user's assigned servers" As a result, you will be able to load-balance on accounting department servers only for accountant users, once these specific servers have been assigned to the accountant users.



###

Editing an existing Server

To modify an existing server, simply click on the "Edit" button of the server you want to update. The following window will be displayed:



Load Balancing using a Connection Client

You are not using the Reverse Proxy role of the Gateway (default case)

This is the default case if you just installed Terminal Service Plus. In this case, if **you want to generate a** <u>Connection Client</u> **to connect to a given Application server**, then:

• Do not check the "Use Load-Balancing" checkbox on the on the Gateway Portal tab of the Connection Client Generator,

Enable Load-Balancing ? Use Load-Balancing Gateway Web port number 80 When 'Use Load-Balancing' is checked, it enables using the Gateway with Load-Balancing to connect to an Application Server of the farm. Prior using this advanced feature, please read our documentation	
When "Use Load-Balancing" is checked, it enables using the Gateway with Load-Balancing to connect to an Application Server of the farm.	
with Load-Balancing to connect to an Application Server of the farm.	
Prior using this advanced feature, please read our documentation	
ent location: C:\Users\Admin\Desktop Browse	

- Use the public IP address or hostname of your Application Server directly in the "Server" field.

However, if **you want to generate a** <u>Connection Client</u> **to connect to the less loaded server** and use Load Balancing, then:

• Check the "Use Load-Balancing" checkbox on the Connection Client Generator,

Wind	ows	Client Gen	erator				_,
Enable Lo			client Seamless clie Gateway Web port		Program	Security	Load-Balancing
v	with Loa	d-Balancing to conr	' is checked, it enable nect to an Application ature, please read ou	Server of the farm.			

- Use the public IP address or hostname of your Gateway Server directly in the "Server" field.

You are using the Reverse Proxy role of the Gateway ("/~~" in URL)

See this page.

Activating the Load Balancing for a Gateway Portal access

Activating Load Balancing is really easy. It only takes three steps:

•

1. Generate a Web Access page with the option "Generate a Gateway Portal enabled Web Page" checked, by clicking on the Web Portal Preferences tile of the Web tab:

TSplus - Administration Console		– 🗆 X
TSPLUS	Remote Access Management Console	
	P Web Portal Design	
	Web Portal Preferences	
S WEB	Applications Portal	
Web Portal		
HTTPS Web Server	Stredentials	
⊞ ∃ FARM		
	RemoteApp Client	
SYSTEM TOOLS	HTML5 Client	
없 advanced	R HTMLS Top Menu	
값 ADD-ONS		
ତିଙ୍ଗ LICENSE		

					*
Preferences					
Default Values					
Login:					
Password:					
Domain:					
	Show the Dom	nain field	Remer	mber last login	
Advanced					
Keyboard:	as_browser				
Access Type					
Available Clients:	HTML5	(iPad, iPhone	e, Android d	evices, comput	ers)
	Remote App	(Windows P	Cs)		
Gateway Portal:	📝 Generate a Ga	ateway Portal	enabled W	eb Page	
Upload: Folder to selec	t files.	⊂ Downloa	d: Folder for	all received file	s
 User Desktop (defa 	ault)	O User	Desktop (de	efault)	
My Documents			ocuments		
WebFile folder		Web	File folder		
Custom folder:		Custo	om folder:		
	Select			Sele	ct)
Folder path from wi select files to be up			er where all e stored on	downloaded file	s
Downloaded files from the users PC will be stored in the specified folder.					
Downloaded file					
		will be stored	l in the spec	ified folder.	
	es from the users PC in the user PC, Down	will be stored load button o	l in the spec	ified folder.	
(Drag/Drop from	es from the users PC in the user PC, Down	will be stored load button o	l in the spec or File Transf	ified folder.	

- •
- 2. Enable Load Balancing by clicking on the "Enable/Disable Load Balancing" button (on the Load Balancing Manager, located on the Farm tab of the AdminTool):

1 TSplus - Administration Console	
TSPLUS	
€ НОМЕ ^	
WEB WEB	
FARM	
Manage	
Reverse-Proxy	
Load Balancing	
Assigned Servers	
SYSTEM TOOLS	
ADVANCED	
값 ADD-ONS	
Enable/Disable Load Balancing	
Load Balancing is Enabled	

3. Open a browser and navigate to the Web Access page you generated in step 1 (by default: <u>http://localhost/index.html</u>). After typing a login, you will see that **the Web Access page choose the less loaded server of your farm**:

TSPLUS Log on	
TSPLUS	1
Headquarter	
HTML5 RemoteApp Log on	

###

Activating the sticky session feature

Regardless of your connection method, you will always be able to activate the sticky session feature by clicking on the right button of the Load balancing window:



It will allow you to reconnect to a disconnected session instead of opening a new session on a different server.

How to mount a logical drive within a TSplus session

This tutorial will cover the following aspects:

•

.

How to deploy a logon script and have multiple logon scripts scenarii.

Mounting a specific folder within a session from client or server side.

If you wish to publish a folder on a logical virtual drive for your users, just follow this procedure: Prior to creating the script, open windows explorer and click on "Folder and search options".

G	🔵 🛡 詞 🕨 Libraries 🕨				
0	rganize 🔻 🛛 🛜 Open 🦳 Share w				
K	Cut				
Þ	Сору				
Ū	Paste				
	Undo				
	Redo				
	Select all				
	Layout +				
	Folder and search options				
×	Delete				
	Rename				
	Remove properties				
	Properties				
	Close				

Then, click on the view tab and uncheck the box "Hide extensions for known types":

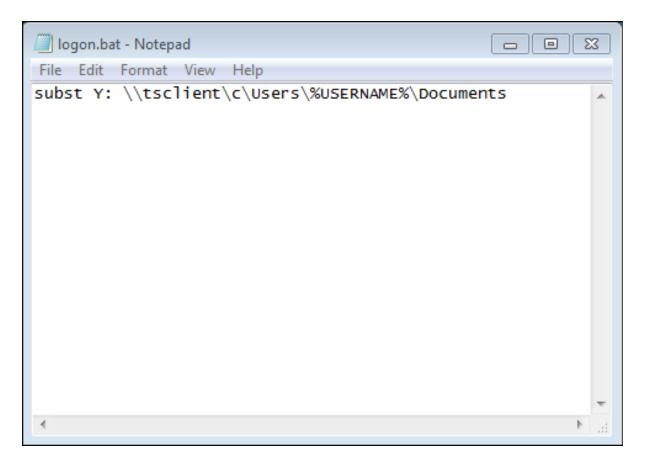
Folder Options	×
General View Search	
Folder views You can apply the view (such as Details or Icons) to you are using for this folder to all folders of this type Apply to Folders <u>R</u> eset Folders	
Advanced settings:	
Files and Folders	*
Always show icons, never thumbnails	
 Always show menus Display file icon on thumbnails 	Ξ
Display file size information in folder tips	
Display the full path in the title bar (Classic theme only)	
Hidden files and folders	
 Don't show hidden files, folders, or drives Show hidden files, folders, and drives 	
Hide empty drives in the Computer folder	
Hide extensions for known file types	
Hide protected operating system files (Recommended)	-
Restore Defau	lts
OK Cancel A	pply

Create a text document and modify the extension by naming it "logon.bat":



Inside the file, enter for example this command to publish the Folder.exe folder:

"subst Y: \tsclient\C\Users%USERNAME%\Documents"



Then, on the start menu, type in gpedit.msc on the search taskbar. We are going to use local policy so that every user connecting to this server launches the script.

Go into the user's configuration menu, then into the Windows settings, and finally, into Scripts (Logon/Logoff) Double click on the Logon script, then click on "Add", then on "Browse".

Local Group Policy Editor			- • X
File Action View Help			
🗢 🔿 🖄 📰 🖾 🗟 🖬			? x
Local Computer Policy Me Computer Configuration Software Settings	Scripts (Logon/Logoff)	Logon Properties Scripts PowerShell Scripts	
 ▷ Software Settings ▷ Administrative Templates ■ Software Settings ▷ Software Settings ■ Windows Settings ■ Windows Settings ■ Soripts (Logon/Logoff) ▷ ■ Security Settings ▷ ■ Policy-based QoS 	Logon Display <u>Properties</u> Description: Contains user logon scripts.	Logon Scripts for Local Computer	
		Name C:\Users\Administrator.admin-PC\Desktop\logon.bat	Up Down
 IIII Deployed Printers Internet Explorer Maintenance Administrative Templates 		< >	Add Edit Remove
		To view the script files stored in this Group Policy Object, p the button below. Show Files	ress
	Extended Standard /	OK Cancel	Apply

Then, click on "Show Files" button on the Logon Properties window and copy your logon.bat script into the path given by the Policy Editor, i.e.: "C: \Windows\System32\GroupPolicy\User\Scripts\Logon"

🔾 🗸 🦉 Windows 🕨 System3	2 • 0	GroupPolicy ► User ► Sc	ripts 🕨 Logon	✓ 4→ Sea	rch Logon	-	×
Organize 🕶 💼 Open 🛛 Print	Nev	w folder			833	•	0
Organize - Open Print Favorites		Name		Date modified	Туре	Size	
Desktop		🗟 logon		2/21/2018 8:41 PM	Windows Batch File		1 KB
 Recent Places Libraries Documents Music Pictures Videos 	E						
🖳 Computer 🛍 Local Disk (C:)							
	-						
logon Date mo Windows Batch File		: 2/21/2018 8:41 PM : 48 bytes	Date created: 2/21/201	8 8:44 PM			

- You can copy this logon.bat file in C:\ProgramData if you want this script to be executed for all of your users.
- If you need a specific logon script for each user then copy the script in C: \Users\Username\AppData\Roaming

Now how do we make this Y drive appear in the user session? There many ways to achieve this. You can create a new application within the admin tool and assign it to your users, doing so the shortcut will appear in the session:

🐂 Common Folder Settings — 🗌	\times
Path/Filename:	
C:\Windows\explorer.exe	
Start Directory:	
C:\Windows	
Display Name:	
Common Folder	
Command line option:	
Y:	
Window State:	
Default (Maximized if single application on Web/Mobile client)	~
Folder:	
(top-level)	- 😮
Save Test Cancel	



If you connect to a session with mstsc.exe, don't forget to go to the options menu, and on the Local Resources tab, under Local devices and resources, click on "More", then check the box "Drives".

If you want to assign this script only for non-admin users, follow this <u>tutorial</u>. If you want to secure the access of a folder, see our documentation to publish a <u>secured folder</u>.

Long Term Support versions

Customers who have subscribed to TSplus Support & Update Services and are not interested in TSplus latest features and improvements can install a TSplus LTS (Long Term Support) version.

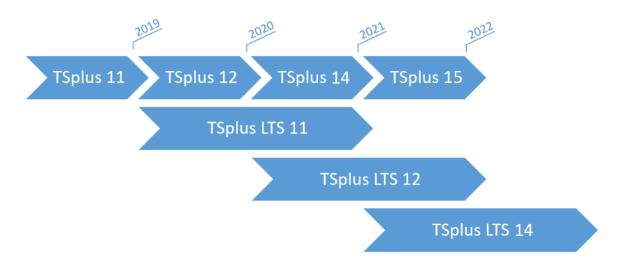
TSplus LTS (Long Term Support) version extends the period of software maintenance; it also reduce the frequency of software updates to reduce the risk, expense, and disruption of software deployment, while promoting the dependability of the software.

Moreover, TSplus LTS (Long Term Support) does not receive any new features.

TSplus lifecycle

TSplus standard versions are published quite often and the latest release is always the best solution available to our customers: all known bugs are fixed and new features are available very often.

A new major TSplus version is released at the start of every year: TSplus 11 in January 2018, TSplus 12 in January 2019 and so on, as shown in the diagram below.



Starting January 2019, TSplus is also available in a Long Term Support version, named "LTS". Every year, TSplus will publish a stable LTS version which will be supported for 2 years.

Benefits and Limitations of TSplus LTS

TSplus LTS has several benefits:

- · No updates except for security fixes and Windows updates compatibility
- No changes in behavior and no changes in features when you update
- Less risk when updating between two minor versions of a given LTS
- Supported for 2 years

TSplus LTS also has limitations and constraints:

- Customer must purchase Support & Update Services (a license cannot be activate without active Support & Update Services)
- No new features at all (compared to TSplus standard version which constantly receives a lot of updates and new features)

We recommend our customers to use TSplus standard version to benefit from our state-of-theart solution.

TSplus LTS Links

TSplus LTS 11 (supported from 2018-12 to 2020-12):

- Changelog
- <u>Setup</u> (to install TSplus on a new server)
- <u>UpdateRelease</u> (to update an existing TSplus installation)
- LTS11 Documentation

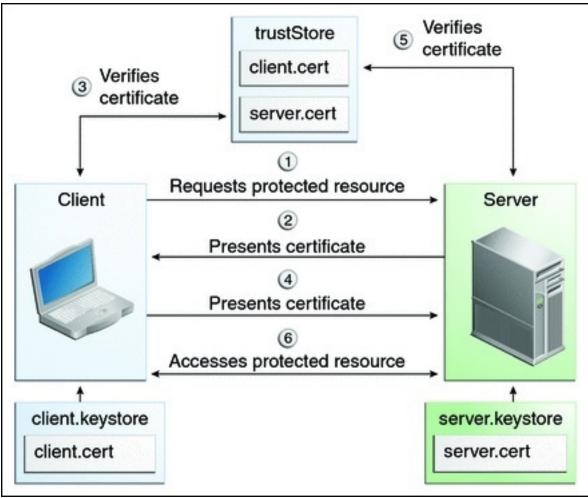
TSplus LTS 12 (supported from 2019-12 to 2021-12): End Of Support.

Activating Mutual SSL Authentication

What is Mutual Authentication?

Many people are expecting extra security and Mutual authentication is already supported in Terminal Service Plus. It is usually implemented by banks or government bodies. To understand what that is, we can compare it to a standard SSL process where you will add extra check to verify if the user web browser is allowing SSL connection. You know what your server-side SSL certificate is. Imagine that the certificate is imported into the web browser to ensure that this specific web browser is trusted to create a connection. In the first step of communication, the web browser is acting as a client and in the second step, it is the reverse. At the end both side, client web browser and web server, have accepted the authority and the connection can start.

A more complete definition: Mutual SSL authentication or certificate-based mutual authentication refers to two parties authenticating each other through verifying the provided digital certificate so that both parties are assured of the others' identity. In technology terms, it refers to a client (web browser or client application) authenticating themselves to a server (website or server application) and that server also authenticating itself to the client through verifying the public key certificate/digital certificate issued by the trusted Certificate Authorities (CAs). Because authentication relies on digital certificates, certification authorities such as Verisign or Microsoft Certificate Server are an important part of the mutual authentication process.



Activating it on TSplus

TSplus built-in web server enables to setup mutual authentication.

To enable the mutual authentication follow this process:

You will have to install the latest Java Development Kit (JDK), available from <u>http://java.com</u> > Downloads > JDK.

1. Create and edit with Notepad the following file: C:\Program Files (x86)\TSplus\Clients\webserver\settings.bin

Add these 3 lines:

disable_http_only=true disable_print_polling=true force_mutual_auth_on_https=true

2. Remove cert.jks

In "C:\Program Files (x86)\TSplus\Clients\webserver" you will see the file cert.jks Copy it in "C: \Program Files (x86)\TSplus\Clients" Remove "C:\Program Files (x86)\TSplus\Clients\webserver\cert.jks"

3. Create the batch file

In 'C:\Program Files (x86)\TSplus\Clients' create a batch file, for example "createcertuser.bat" with these settings:

@rem uncomment next line, if you want to generate new self signed cert.jks @rem keytool genkey -v -alias jwts -keyalg RSA -validity 3650 -keystore cert.jks -storepass secret -keypass secret -dname "CN=localhost, OU=my_ou, O=my_org, L=my_city, ST=my_state, C=MY" @keytool -genkey -v -alias AliasUser1 -keyalg RSA -storetype PKCS12 -keystore forBrowserUser1.p12 -dname "CN=some_name, OU=some_ou, O=some_org, L=Paris, ST=FR, C=FR" -storepass mypassword -keypass mypassword @keytool -export -alias AliasUser1 keystore forBrowserUser1.p12 -storetype PKCS12 -storepass mypassword -rfc -file forCertUser1.cer @keytool -alias AliasCertUser2 -import -v -file forCertUser1.cer -keystore cert.jks -storepass secret @del forCertUser1.cer

This will automatically import the cert key pair from the web browser into "cert.jks" after creating its browsers key pair.

4. Restore the new created the modified "cert.jks"

Copy "C:\Program Files (x86)\TSplus\Clients\cert.jks" into "C:\Program Files (x86)\TSplus\Clients\webserver" and restart the Web Servers.

5. Certificate import and Testing

The provided batch example should have generated a test file "BrowserUser1.p12". When you will open the HTTPS address, you will get a security message and you will be unable to access Web Server pages. With Chrome or IE, you can click on this 'BrowserUser1.p12' file to import the certificate into Windows default key store. With FireFox, you have to go to Settings and to import this "BrowserUser1.p12" file under your certificate folder.

As soon as you have properly imported it, you will be able to access the HTTPS address.

The administrator can create a separate key pair file for each user.

For example:

forBrowserUser1.p12 forBrowserUser2.p12 forBrowserUser3.p12

And he can export theses certificates into cert.jks. If he wants to disable the access to one user he will just have to delete this user from "cert.jks". Doing so, the user will lose his authorization and will not be able to access the web server anymore.

This mutual authentication only affects the HTTPS connections and HTTP connection will be prohibited with the command line: settings.bin>disable_http_only=true

Open Files on Client Side

Overview

This feature is a powerful one. It allows to open documents located on the server on the client side depending on its file extension.

For instance, you can open a Microsoft Office Word document without having Office installed on your server.

The .docx (or .xlsx) document is automatically uploaded on the user side where the local Office will be used to open it.

If you are hosting your application on a Cloud server and if your application is generating an Excel, Access or Word document, this feature prevents to care about Office licenses on the server.

Configuring a File Type to open on the client side

The tile "Open Files on Client Side" is located in the "Sessions - Settings" tab of the AdminTool. Click on it to display the configuration window:

	Splus - Administration Console -	10.81 1.0			×
	TSPLUS	Remote Acce	ss Management Console		
	HOME APPLICATIONS PRINTER		on Management settings on Opening Preference		
	WEB				
	FARM	D Open	Files on Client Side	 _	1
ă	SESSIONS	🕒 Open	URLs on Client Side		
	Settings Permissions				
	Client Generator	🚫 Hide	Disk Drives		
g	SYSTEM TOOLS				
繱	ADVANCED				
-	ADD-ONS	😳 Seam	ess color settings		
64	LICENSE				
	Files Type	es to c	open on user side 📃 🎽		
	Files Type .accdb .doc .docx .eml .mdb .pps .ppsx .ppt .pptx .pptx .pub xls xlsx	es to c	Add a new File Type		

The button "Add a new File Type" allows you to add an extension (such as ".docx" for Microsoft Office Word 2007-2010) to the list.

All the files having an extension in this list will then be opened on client side, provided that you use one of Terminal Service Plus connection clients:

• Any generated Terminal Service Plus Client (Seamless, RemoteApp or RDP)

- Any Windows connection from the Terminal Service Plus Web Portal
- Any HTML5 connection from Terminal Service Plus Web Portal

Warning: this feature is not supported for:

• Any RDP client (mstsc for example)

Troubleshooting

If you have configured a file type to open on client side, and it is not working (i.e. the file is still opened on its own computer), then we advise you to check the "Open With" list in Windows context-menu:

- right-click on the file.
- click on the "Open With" menu item.
- if there is more than one application in this list, click on "Choose default program" and select "OpenOnClient.exe".

This Terminal Service Plus great tool applies its configuration to all users using the computer, however please keep in mind the following rules:

- Windows allows each user to change this default opening program with another program of its choice.
- Using HTML5 connection client, the file will be downloaded and managed by the local browser. Some browsers treat some file types in specific ways, so browser's settings should also be checked twice.

These rules explain most of the issues when using the Open On Client feature, that is why we advise you to start by checking the default program:

- for the logged user on the server
- for the user on the client
- for the browser on the client (when using HTML5)

Open URLs on Client Side

Overview

This feature is a powerful one. It allows to open on the client side every websites links and websites shortcuts located on the server.

For instance, you can open YouTube videos directly on the client, thus saving lots of bandwidth and CPU power on your server.

The web address (URL) is automatically transferred on the user side where the local default browser will be used to open it.

Enabling this Feature on a server

The "Open URLs on Client Side" tile is located in the "Sessions - Settings" tab of the AdminTool. Click on it to display the configuration window:

ТДТ	Splus - Administration Console		 Х
	TSPLUS Rem	ote Access Management Console	
ŵ	НОМЕ	Session Management settings	
	APPLICATIONS	Session Management settings	
\$	PRINTER	Session Opening Preference	
O	WEB		
₽	FARM	Open Files on Client Side	
8	SESSIONS	C Open URLs on Client Side	
	Settings		
	Permissions		
	Client Generator	🥸 Hide Disk Drives	
ø	SYSTEM TOOLS		
繱	ADVANCED	C Seamless color settings	
చి	ADD-ONS		
©7	LICENSE		

🛺 Opening URLs on user side 🛛 –	- 🗆 X
Select protocols to open on user sid	
Define URLs to open on user side: -	
	G Add
	Remove
URL On Client is currently disabled	Apply

Http and https protocols boxes are not ticked by default. You can also activate tel, sms and mailto protocols by ticking the corresponding boxes. Then click on the "Apply" button, which allows you to activate this feature for all users on the server.

In order to fully enable this feature, every user will have to restart its session (logoff then login) before they can use this feature.

All the web links and shortcuts will then be opened on client side, provided that you use one of Terminal Service Plus connection clients:

- Any generated Terminal Service Plus Client (Seamless, RemoteApp or RDP)
- Any Windows connection from the Terminal Service Plus Web Portal

Warning: this feature is not supported for:

- Any RDP client (mstsc for example).
- Any HTML5 connection from Terminal Service Plus Web Portal.

Windows 8 and 8.1

Starting with Windows 8, Microsoft has forbidden automatic change of user's default browser. This is why, once the feature is activated on the server, every user will have to choose 'Url On Client' when asked for a default browser.

How o	lo you want to open this type of link (http)?
vm	Default Host Application
Ø	Internet Explorer
	Url On Client
	Look for an app in the Store

This window will only be displayed the first time a user opens a web link. Unfortunately, this is Microsoft Windows policy and we are not aware of any workaround.

Portable Client Generator

Overview

TSplus creates by default an icon for the Portable Client Generator:



It can also be accessed on the Server's tile of the AdminTool:

TA T	Splus - Administration Console - 👘		×
	TSPLUS Re	mote Access Management Console	
俞	номе		
	APPLICATIONS	Windows Client Generator	
Ø	PRINTER	General Display Remote Desktop client Seamless client Local resources Program Security Load-Balancing	
0	WEB	Server Server address Port number 192.168.1.254 3389	
∎	FARM	User	
å	SESSIONS	Logon Password	
	Settings	Domain name (without extension)	
	Permissions	1 Spine	
	Client Generator	Preferred display mode	
g	SYSTEM TOOLS	Remote Desktop client O RemoteAPP client O Seamless client	
~		O Disable background & animations for better performances	
263	ADVANCED	Client location: C:\Users\Admin\Desktop Browse	
ది	ADD-ONS	Client name: john.connect	
©7	LICENSE		

It enables you to create 3 types of connection clients which can be copied to the users' Desktop or onto a USB stick for portable use.

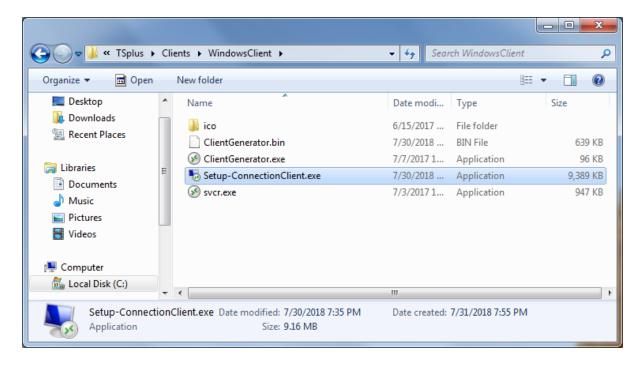
Note: Connection Clients are not compatible with Mac computers.

Since TSplus 11.40 release, the client generator has been redesigned to be numerically signed and to avoid false/positive antiviruses reactions. Instead of a ".exe" program, the new Client Generator is creating a flat encrypted file with the extension ".connect":

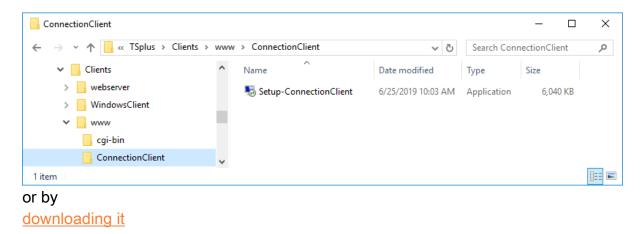


Pre-requisite on Client Side

On client side, each user will have to run a signed program named "Setup-ConnectionClient.exe" as a pre-requisite. This program is available on your server, in the TSplus program folder: TSplus\Clients\WindowsClient:



or on the TSplus\Clients\www folder:



Detailed Overview

Click on a tab to go to the corresponding information:

Main window - General Settings

When you launch the client generator, the first tab displayed is the general tab, Here you will find all of the essential connection settings that you need to get you started.

- Server Address: Enter the IP address of the server you would like the client to connect to.
 - **Port Number:** Enter the server port number. The default is 3389.
- **Username and Password:** If you enter a username and password, the client program will not ask the user to retype it at each session. To reset this logon/password saving, you must create and edit a shortcut of the Remote Desktop Client and add the -reset on switch at the end of the target field.

Credentials

- If you don't want to save credentials, enter "nosavecredential" in the logon field of the Portable Client Generator.
- If you don't want to display the logon window with the user name, password and domain name, simply enter "nopassword" on the password field.
- If you want to enable autologon, enter *SSO in the username field, the client program will just ask for username and password during the very first connection. It will save this information on the user's workstation so that the user doesn't have to identify himself ever again.
- If you want the current local user's name to be displayed as a logon for the session, enter **, or %USERNAME% in the logon field.

Domain name: Enter a domain name if any.

Preferred Display Mode: You can choose your preferred Display Mode from the following options:

The Classic Remote Desktop, displaying your remote session environment.

٠

The Microsoft RemoteApp connection client, to display your remote applications as if they were installed locally. It has a better graphic performance over minimized applications.

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The Seamless Client, which works the same as RemoteApp, but for older versions of Windows such as Windows XP and 2003.

Terminal Service Plus Seamless vs Microsoft RemoteApp

Microsoft RemoteApp is a Microsoft feature which requires Windows 7 Enterprise or Ultimate and above.

All users PCs must have at least a RDP6 client. Unlike the Seamless client, the RemoteApp connection client does not depend on the transparency color settings. You can change the RemoteApp client display and Printing preferences on the Web tab of the Admintool. Minimized applications can be directly found inside the Windows taskbar, like local applications.

Terminal Service Plus Seamless delivers a similar user experience and is available on any Windows host system.

Based on one transparency color selected by the Administrator, the Microsoft Remote Desktop is not displayed anymore and the user will just see his published applications.

The Seamless color <u>can be modified</u> and must be the same when using the AdminTool and the Portable Client Generator.

More information on these types of clients can be found here.

Network speed: You can choose between two options depending on your network speed:

- Disable background display & graphic animations for low speed networks.
- Enable background display and graphic animations for fiber optic or fast network.
- Client location: Define the location of your generated client.

Client name: You can name your client as you wish.

Display

Wind	dows	Client G	enerat	tor					_	. ×
General	Display	Remote Desk	top client	Seamless clien	t Loca	resources	Program	Security	Load-Balancing	
Graphic	al setting	s								
-	16 bi	ts color resoluti ts color resoluti ts color resoluti ts color resoluti	on							
	Dual	-screen	Span				🗌 Enabl	e shortcut	keys	
	- Remo - Seam	ettings apply to te Desktop clie less client teApp client		connection clier	t:					
Client loca	ation:	C:\Users\Adm	nin\Desktop)		Browse			Create Client	
Client nan	ne:	john.connect								

On this tab, you can change the color and the session screen resolution. You can also adapt your session for dual-screens, with or without span. The span option allows you to stretch your session across both screens. You can allow the use of the TAB key in the session.

Remote Desktop Client features

On this tab, you can choose which resolution you want to enable for the user:

Wine	dows	Client Genera	tor				_,
General	Display	Remote Desktop client	Seamless client	Local resources	Program	Security	Load-Balancing
Remote	e Desktop	p					
2	 102 128 128 	0 x 600 4 x 768 0 x 720 0 x 1024 r screen size screen					
	🗹 Sma	art re-sizing of the Remote I	Desktop				
	The	Remote Desktop will not h	nide the local task!	bar			
		settings are only valid for th ct the Remote Desktop cliv					
Client loc Client nar		C:\Users\Admin\Desktop john.connect	p	Browse			Create Client

You can check the boxes to enable smart-sizing of the Remote Desktop, and if you want the Remote Desktop not to hide or overlap the local taskbar.

Local Resources

VVIII	dows	Client Genera	tor				-
General	Display	Remote Desktop client	Seamless client	Local resources	Program	Security	Load-Balancing
-Local d	levices –						
	Disks Printe Sour COM Smar USB	nd I ports					
	Play rem	ote sound:	Local	y OF	Remotely	0) No
Univers		option view with the local PDF Re t on default printer - local o ect the local printer - local o	driver included	Printer scaling O Use origin O Fit pages O Shrink pa	al page siz to printable	area	(f necessary)

The local resources tab gathers all the devices that you may redirect in your remote session.

The editable field next to the **disks** box allows to specify which disks are available in the remote session. You just have to separate each letter of disk (C :, E: ...) by a comma. When the disks box is ticked and no disk is specified, all the disks are included in the remote session.

Printers correspond to LPT ports, and COM Ports correspond to Serial Ports. Since TSplus 11.50 version, these local devices are selected by default.

Below, you can choose your option for printing, with the universal printer:

- Local PDF Reader preview: The document will be rendered as a PDF and the local Acrobat Reader will open the file. The user can print it, or save a copy on his local disk drive.
- **Print on the user's default printer:** the document will be automatically pushed to the user's default printer (the local print driver is included in the TSplus connection client).
- **Select a local printer:** The user can select one of his local printers (the local print driver is included in the TSplus connection client).

If you do not have a PDF Reader installed on your machine, we recommend the use of Foxit Reader. See our <u>video tutorial</u> on how to print.

Program

Window	s Clien	t Genera	tor				_ ×
General Displa	y Remote	Desktop client	Seamless client	Local resources	Program	Security	Load-Balancing
- Startup program We re to ass	n ? command to gn Applicati	ouse the Admin on(s) to users or	Tool				
Path/Filename Start Directory Command line	option		es (x86)\Foxit Soft es (x86)\Foxit Soft			iter.exe	Browse
Client location:	C:\Users	\Admin\Desktop		Browse			
Client name:	john.com						Create Client

You can set a startup application via the Portable Client Generator, and specify its path, directory and parameters, since the 11.30 release. However, we recommend you to use the AdminTool to assign the desired applications.

Security

TSplus offers two extra layers of physical security to keep your users' connections safe. The connection can be locked to the ID of a USB key, locked to a computer name, or you can use both layers of security simultaneously.

- If locked to a USB key, the user can initiate a connection from any qualifying windows computer by inserting the USB key and using the connection program placed there by the administrator.
- If locked to a computer name, the user can only successfully connect from the computer whose name has been registered with the server for that user's portable client connection. If both security options are used, the user is limited to connecting from their specific device and only if the correct pre-configured USB key is in place.

In order to lock a connection client onto a USB key you can do so by copying the client generator located in : C:\Program Files (x86)\TSplus\Clients\WindowsClient Now double click on the client generator and check the lock on serial number box located on the security tab. Once it is done, you can delete the client generator from the USB key. The newly generated connection client will be placed on the desktop, don't forget to copy it back to the USB key! You can delete the client

generator that you copied on the USB key afterwards.

Wind	dows	Client Genera	tor				_ ×
General	Display	Remote Desktop client	Seamless client	Local resources	Program	Security	Load-Balancing
Advanc	ed client	security options					
	Lock	it on PC name					
	WIN-A1	1L00CN0E56					
	Lock	it on serial number					
	303119	124					
	- Remo - Seam	ettings apply to all kind of te Desktop client less client teApp client	connection client:				
		it: Disable this generated o					
	No limit	Number of days from	the first use date o	of this generated cl	ient		
	Deny	vuser from saving credent	ials				
		Save usemame only					
	Encr	yption V2					
Client loca	ation:	C:\Users\Admin\Desktop)	Browse			Create Client
Client nan	ne:	john.connect					

•

You can define the **time limit** from the first use date of a generated client by entering the value on the time limit box. (which is by default set to "no limit").

•

Boxes below enable you to:

- Not display the ability to save credentials for a generated client.
- Save username only.
- Use Encryption V2.

Load-Balancing

You can also enable the Load Balancing to connect to one server of your farm. Do not check the "Use Load-Balancing" box if you did not activate the Load-Balancing feature on your server. You will need to enter the Gateway Web port, which should be the same as the default web port used on all the servers of your farm.

ieneral Di	Display	Remote Desktop client	Seamless client	Local resources	Program	Security	Load-Balancing
Enable Loa	ad-Bala	ancing ?					
	Use I	Load-Balancing Ga	teway Web port nu	umber 80			
W	Vhen 'U	Jse Load-Balancing' is ch	necked, it enables u	using the Gateway			
			A 1: 1: C	onvor of the form			
wi	vith Loa	d-Balancing to connect t	to an Application 5	erver of the failt.			
		d-Balancing to connect i ng this advanced feature					

Remote Desktop Client	
The Remote Desktop client client has been cop Client name: john.connect	oied on your Desktop
	ОК

Client Customization is possible. See the corresponding documentation on how to modify the client's icon

and edit or delete its parameters

.

Terminal Service Plus Prerequisites

1. Hardware

Terminal Service Plus can work on your PC and here is the minimal recommended hardware:

Number of users	Windows 2008 to 2025 or 7 to 11 Pro
3 - 5	I5 or above One CPU 2 GHZ Minimum : 4 GB RAM Recommended : 8 GB RAM
10	I5 or above One CPU 2 GHZ Minimum : 8 GB RAM Recommended : 16 GB RAM
25	One CPU I7 or Xeon Minimum : 16 GB RAM Recommended : 32 GB RAM
50 and above	32 GB Dual CPU - SSD Disk dedicated to the system Minimum : 32 GB RAM Recommended : 64 GB RAM

Over 50 concurrent sessions, we recommend to use a farm of servers, using the Load Balancing feature, available on the Enterprise Edition. Each server (physical or virtual ones) handling up to 50 concurrent users.

Comment: The type of hardware you need will mostly depend on what kind of resources the applications you wish to publish consume the most (CPU/memory/Disk). You might consider getting a server with SSD drives if you plan on using an application that accesses a database on your TSplus server as it will greatly enhance the performances.

2. Operating system

Your hardware must use one of the operating systems below:

- Windows Vista Service Pack 2
- Windows 7 Service Pack 1
- Windows 8/8.1
- Windows 10 Pro
- Windows 11 Pro
- Windows Server 2008 SP2/Small Business Server SP2 or 2008 R2 SP1

- Windows Server 2012 or 2012 R2
- Windows Server 2016
- Windows Server 2019
- Windows Server 2022
- Windows Server 2025

32 and 64 bits are supported.

The required framework is .NET version 3.5 for all supported Windows versions.

•

If you install TSplus on a Windows 2008 to 2019 make sure the RDS or Terminal Services roles as well as the RDS Terminal Services licensing role are not installed before installing TSplus. If these roles were present, remove them and reboot.

•

Windows 10 Home edition is not supported.

•

On Windows Server 2016, 15 sessions maximum are allowed for Remote Desktop access.

Windows Server 2019 Essentials Edition does not support RemoteApp.

N.B: TSplus LTS 11 supports Windows XP and Windows Server 2003.

3. Network parameters

The Terminal Service Plus Server must have a fixed IP address:

Internet Protocol Version 4 (TCP/IPv4)	Properties	?	×	
General				
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.				
Obtain an IP address automatically				
O Use the following IP address:				
IP address:	192 . 168 . 1 . 212			
Subnet mask:	255 . 255 . 255 . 0			
Default gateway:	192.168.1.1			
 Obtain DNS server address automatically 				
O Use the following DNS server add	resses:			
Preferred DNS server:	192.168.1.1			
Alternate DNS server:				
Validate settings upon exit	Adva	anced		
	ОК	Can	cel	

Remote access (from Wide Area Network - WAN)

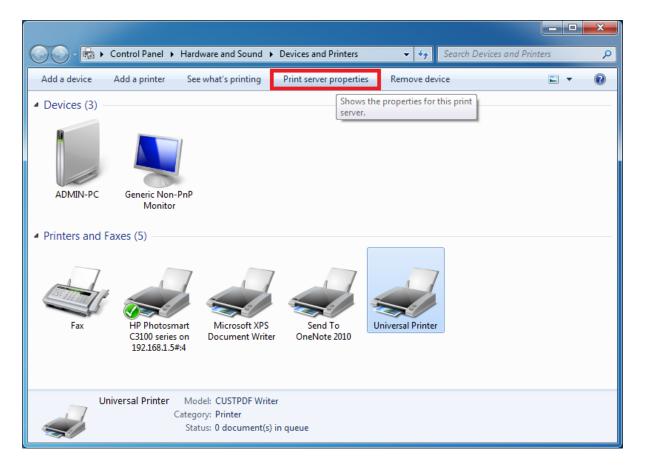
- A DSL connection is recommended as well as a public fixed address. Without a fixed IP address, you should install a dynamic DNS service like http://DynDNS.org> More information about how to set this up can be found here.
- The TCP RDP port (by default 3389) must be opened both ways on your firewall.

Printing with Standard RDP Printer-Mapping Feature

This is commonly used by Remote Desktop users and is equivalent to what you would have with Microsoft Terminal Services. If you plan to use exotic printers, be sure to check the box for printers in the local resources tab of the client generator. See the <u>video tutorial</u> to print with Standard RDP Printer-Mapping Feature.

Windows Client Generator
General Display Remote Desktop client Seamless client Local resources Program Security Load-Balancing Local devices Image: Composition of the security of the securit
Universal printer option Preview with the local PDF Reader Print on default printer - local driver included Select the local printer - local driver included
Client name: john.connect Create Client

Most of the time it will require that you install the same version of the printer drivers on both the client and the server in order to work properly. This means that if your server is Windows 2008 64 bit and your client computers are running Windows XP 32 bit, you will need to install the 32 bit XP Printer Drivers on the server. Click on the Start Menu, then on Devices and Printers. Click on any printer to display the Print server properties button at the top of the window:



Once in the Print Server Properties, click on the Driver tab to manually add your client driver. (In this case, we are installing the Windows XP 32 bit driver)

🖶 Print Server Properties			×
Forms Ports Drivers Security Ad	vanced		
ADMIN-PC			
Name	Processor	Туре	
CUSTPDF Writer	x64	Type 3 - User Mode	
Foxit Reader PDF Printer Driver	хб4	Type 3 - User Mode	
Ghostscript PDF	x64	Type 3 - User Mode	
HP Color LaserJet 2700 Series P	x64	Type 3 - User Mode	
KONICA MINOLTA mc4650 XPS	х64	Type 3 - User Mode	Ξ
KONICA MINOLTA pp4650 XPS	x64	Type 3 - User Mode	
Microsoft XPS Document Writer	хб4	Type 3 - User Mode	
MS Publisher Color Printer	х64	Type 3 - User Mode	
MS Publisher Imagesetter	х64	Type 3 - User Mode	
Remote Desktop Easy Print	x64	Type 3 - User Mode	
Send To Microsoft OneNote 20	х64	Type 3 - User Mode	_
TD 0.1	. <i></i>	T	
A <u>d</u> d	<u>(</u> emove	Prop <u>e</u> rties	
	ОК	Cancel	pply

You can also directly install your printer drivers using information and drivers from the Printer Manufacturer Website.

- It is recommended to check your hardware manual for an installation procedure in a terminal server environment.
- If you are using USB printers, make sure you updated the RDP protocol of your client computer to RDP version 6 or above to ensure maximum compatibility with redirected printers.

For the best results, it is recommended not to use USB printers. Compatibility and reliability are improved when using COM or LPT printers. Some exotic printers, such as label or receipt printers, may not be suitable to be redirected in a TSplus session, you should always check with your hardware manufacturer for compatibility and installation procedures in an RDS or terminal server environment, which is very close to TSplus in this case.

Rehosting Your TSplus License

Online Activation

Online Activation is authorized once a month.

On the new server Go to the "License" tab Click on "Rehost an existing license"

🗱 TSplus - Administration Console -	(H) (I		-	×
	ACCESS			
па номе				^
	© → Activate your License			
	🔁 Buy now			
S WEB	+ Rehost an existing license			
FARM	🤣 Refresh your License			
	License Status ⓒ규 Trial License : 4 days remaining. 5 users.			
SYSTEM TOOLS	Computer ID:			
ស្ត្រិ advanced	Computer name:			
Հ주 ADD-ONS				
ලිතු License	Editions System Edition Printer Editon	Mobile Web Edition Enterprise Edition		
				~

Enter your Activation Key:

License Rehostin	ıg	
Please enter your Activation	Key:	
XXXX-XXXX-XXXX-XXXX		
· · · · · · · · · · · · · · · · · · ·	y in our order confirmation email. you require any help rehosting your licens	e.

Select the initial Computer you want rehost.

License Rehosting	
Please select the initial Computer you want to reh	host from:
- DESKTOP-	
This is the original Computer, which you want to stop Please contact Support should you require any help r	-

Confirm rehost

License Rehosting	
Are you sure you want to rehost your existing licenses to this new computer?	
Please note:	
 Rehost can only be done once every 6 months. Rehost cannot be reverted and will disable your licenses on the previous computer af 	ter a grace
period of 15 days.	

Your license rehost is finished.

Your licenses have been rehosted!	
You can now safely close this window.	

Wait a few moments for your AdminTool to synchronize until the window appears.

License	×
Your permanent license has been successfully activated! Permanent license activated. Enterprise edition. Unlimited users. Permanent license activated.	
ОК	

Congratulations on your license has been successfully activated!

Offline Activation

Offline Activation can also be done for rehosting licenses.

When the server does not have Internet access, the 'rehost an existing License' button will present the offline rehost page:

🕞 License Rehost	- 🗆 X
License Reho	st
Copy rehost URL	Icensing/rehost/start/5cf31979169c9741fa80e7d82de5125632983940237446adfcb4668db3ba6427/wIN-QQ0EMKTTB9Q
ලිදා Refresh your	license

The process is the same as Offline Activation.

Remote Connection from an iPhone / iPad / Android device

You can connect to your Terminal Service Plus server on any browser from any mobile device supporting the HTML5 technology, such as:

- an iPhone
- an iPad
- an Android smartphone
- an Android tablet

Edit the preferences for Mobile devices

Since the 11.20 release, the TSplus HTML5 client has been greatly enhanced to offer the best possible user experience even from Smartphones or tablets. The keyboard has been redesigned to automatically pop-up when the focus is over an entry field. The mouse pointer has been redesigned to facilitate the selection of buttons and fields even if located on the left or the bottom borders of a Smartphone.

You can set up various different HTML5 settings for mobile devices or computers on the HTML5 client tile of the Web Tab:

TI T	Splus - Administration Console	- (UKCH -	□ ×
	TSPLUS	Remote Access Management Console	
ŵ	номе		
	APPLICATIONS	Web Portal Design	
¢	PRINTER	Uweb Portal Preferences	
0	WEB	Applications Portal	
	Web Portal		
	HTTPS		
	Web Server	S Web Credentials	
₽	FARM		
8	SESSIONS	RemoteApp Client	
ą	SYSTEM TOOLS	HTML5 Client	
ঞ্জ	ADVANCED	R HTMLS Top Menu	
ස	ADD-ONS		
©7	LICENSE		

HTML5 Client	_ ×					
Menu bar:	All devices and computers \sim					
File Transfer:	✓ Enable File Transfer					
Ctrl+Alt+Del:	Mobile devices only \sim					
Top menu preference:	Transparency ~					
Default Colors:	16 bits \checkmark					
Connection Timeout:	40 ~					
Warning Messages:	Hide Warning Messages					
Sounds:	Play Sounds Theming:					
Background Color Preference	10841658 Choose color					
Add a logo to the background:	Browse Remove the logo					
Logon screen message:						
ABLE BGCOLOR=\'#FFFFFF\' BORD	ER=0 BORDERCOLOR=\'#FFFFFF\' CELLP/					
Change logon screen animated GIF:	Browse Display time msec.: 5000					
Smartphone and tablets Prefe Pointer settings	erences Use recommended values					
○ No pointer ○ Small pointer	Medium pointer O Large pointer					
Transparency	95 %					
Software keyboard settings						
Use soft. keyb. Automatically show the software keyboard when the focus is in an entry field						
Transparency	95 %					
Help	Reset Save					

- Display the menu bar for all devices and computers or for mobile devices only.
- Enable or Disable File Transfer.
- Allow the Ctrl + Alt + Del shortcut on a specific type of device.
- Choose your favorite Top Menu display between transparency and solid.
- The number of graphical color bits.

- The Connection Timeout.
- Show or Hide Warning Messages.
- Enable or disable sounds.
- Choose your favorite background color.
- Add a logo to the background.
- Change the logon screen message and animated gif, as well as its display time in milliseconds.

Smartphone and tablets Preferences:

- If the administrator uses the software keyboard, when it is hiding an entry field, the application is moved up and the user is still able to see what he is typing.
- The administrator can select a small, a medium or a large size for the mouse pointer or no mouse pointer at all. It makes intuitive for the user to navigate inside his application.
- He can also select the level of transparency for mouse and keyboard.

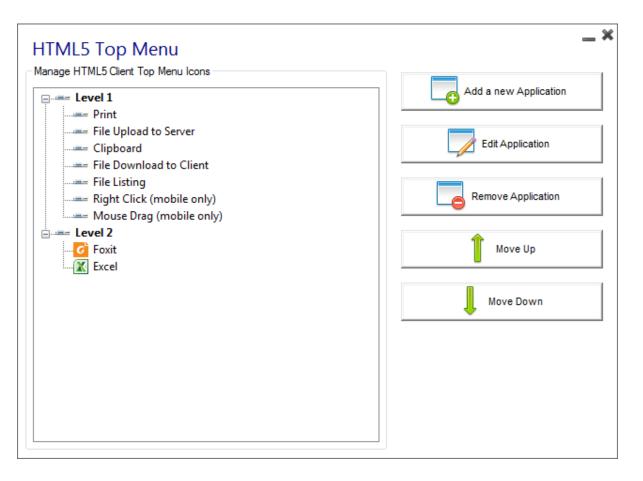
Edit the HTML5 Top Menu

On the HTML5 Top Menu tab, you can add applications that will be displayed on the first or second level of the Top Menu in HTML5:

11	TSplus - Administration Console	-	×
	TSPLUS	Remote Access Management Console	
ଜ □	HOME	P Web Portal Design	
æ	PRINTER	Web Portal Preferences	
Q	WEB	Applications Portal	
	Web Portal		
	HTTPS		
	Web Server	Veb Credentials	
≣⊡	FARM		
å	SESSIONS	RemoteApp Client	
S	SYSTEM TOOLS	HTML5 Client	
ŝ	ADVANCED	8 HTML5 Top Menu	 1
ස	ADD-ONS		1
©7	LICENSE		

On level one, you can find the integrated HTML5 features: printing, file transfer and a clipboard. (For more information about these features, go to theses pages: <u>Universal Printer for HTML5</u>, <u>Using file transfer</u> and <u>Using Clipboard</u>.)

On this example, Foxit and Excel are published on level 2:



And can be found under the integrated features on the top menu into the HTML5 session:



Furthermore, the top-right icon allows you to switch your session to fullscreen.

Terminal Service Plus built-in HTML5 client provides the user a completely new menu on tablets and mobile devices. With this new menu the user gets an easy access to mobile keyboard and right click, but also to file sharing and to our unique Universal Printing feature!



Please refer to <u>this documentation</u> for how to use the mini mouse and keyboard.

Language selection

You can now change the language with the language button at the right of the top menu:



You can choose the language for the specific country you wish to on this menu:

	Language	Locale	Value
\odot	Portal	as_portal	
\bigcirc	Browser	as_browser	
\bigcirc	Gateway	as_gateway	
\bigcirc	Arabic	ar_ar	1025
\bigcirc	Belarusian	be_be	1059
\odot	Bulgarian	bg_bg	1026
\odot	Bengali	bn_bn	1093
\odot	Bosnian (Cyrillic)	bs_cyrl_ba	8218
\odot	Bosnian (Latin)	bs_latn_ba	5146
\odot	Catalan	ca_ca	1027
\odot	Czech	cs_cs	1029
\odot		cs_cz	1029
\odot	Welsh	cy_gb	1106
\odot	Danish	da_da	1030
\odot		da_dk	1030
\bigcirc	German (Swiss)	de_ch	2055
\odot	German	de_de	1031
\bigcirc	Divehi	dv_dv	1125
\bigcirc	Greek	el_el	1032
\bigcirc		el_gr	1032
\bigcirc	English (Canada)	en_ca	4105

Remote Taskbar and Desktops themes

Administrator tools on the server

With the AdminTool, the Administrator can choose between 4 display modes when he assigns applications: <u>The Microsoft Remote Desktop</u>, <u>The Remote Taskbar</u>, <u>The Floating Panel</u> or <u>The Application Panel</u>. The Remote Taskbar, Floating and Application Panels are available for any connection method.

###TSplus Remote Taskbar

When you assign applications to an user, you can enable the TSplus remote taskbar. The TSplus Taskbar is extremely useful when a session is run with the Seamless TSplus connection program. The user can launch remote applications with one click on the TSplus taskbar and still have the full local Desktop available. You can assign the Remote Taskbar to your users or groups by double-clicking on it or by selecting it, then clicking on the "Assign Application" tile:

TSplus - Administration Co	onsole				– 🗆 X
TSPLUS	Remote Access Mana	gement Console			
М НОМЕ	+ Add Application	🧪 Edit Application	× Remove Application	<	> 🤌 Assign Application
				Select an Ap	pplication to Edit or Assign users/groups to it
	Desktop, Taskbar, Floating Pane	and Application Panel	r User Assignment — 🛛	×	
S WEB	Microsoft TSplus Remote Remote Desktop Taskbar	application:	ups will be able to see and run this		
FARM	Published Applications	All authenticated users Specified users and grou Users and Groups	abs		
	Notepad Foxit	DESKTOP-SCVIIVH\John			
SYSTEM TOOLS					
ស្ត្រិ ADVANCED					
Հ굿 ADD-ONS					
ତଳ LICENSE		Add	Remove		
			Save Cano	el	

The Administrator can easily decide what will be the default Remote Desktop theme the user will see when opening a session. Select the TSplus Remote Taskbar, then click on "Edit Application":

Taskbar Theme Pre			- 28
	eference		Ĩ
Select your preferred TSplus Ta	askbar theme —		
Use Blue taskbar theme	as default		
O Use Silver taskbar theme	e as default		
O Use On Top taskbar ther	me as default		
O Use Desktop theme one	e as default		
O Use Desktop theme two	as default		
◯ Use Logon theme as de	fault		
Application working area with	nin the selected th	neme	
Full screen			
Do not overlap the local	taskbar		
Do not overlap the Blue	or Silver bar		
Replace logo/wall	paper on the Des	ktop themes	
Minimize buttons	Preferen	ce	
Minimize Buttons preference			
_		-	
 Justify left 	Center	 Justify right 	
 Justify left On the screen top 	 Center On the screet 		
On the screen top	● On the scre (Systray)	en bottom	
On the screen top	On the screet (Systray) (Systray)	en bottom Preference	
On the screen top	On the screet (Systray) (Systray)	en bottom	
On the screen top On the screen top Notification area Show/Hide the Notification Are O Show the Notification area	● On the scre (Systray) ea (Systray) ea ○ Hide th	en bottom Preference	
On the screen top	● On the scre (Systray) ea (Systray) ea ○ Hide th	en bottom Preference	

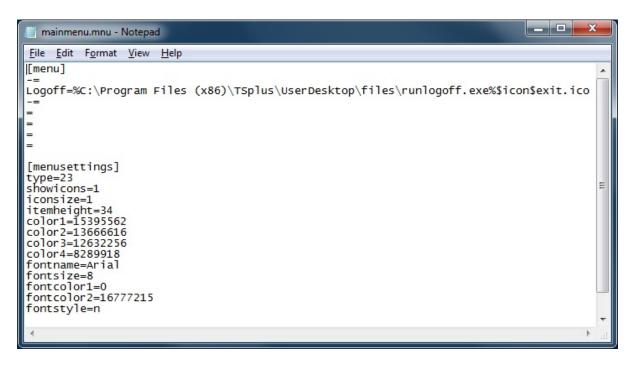
- Only the Administrator can choose the themes for his users.

- He can choose to display the maximized applications in full-screen mode or not to overlap the TSplus taskbar as well as the Silver or Blue taskbars.
- Minimized buttons position on the taskbar can be changed (on top of the screen, on the bottom, on the right, the left side, or in the center). The administrator can even decide to

display it on top of the user screen instead of the default bottom side.

- Systray icons can be hidden by ticking the "Hide the Notification Area" circle.
- Since TSplus 12.60 version, the Logoff button can now be hidden.

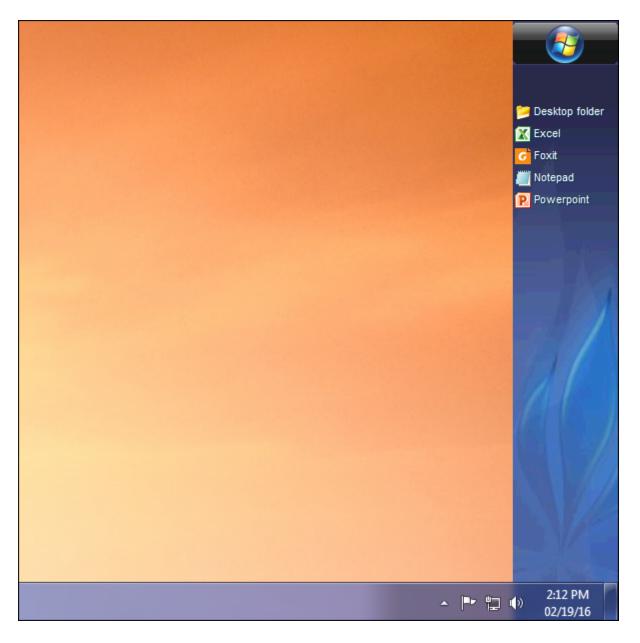
By editing the users menu, the Administrator can add/suppress applications and functionalities. Customization of the users menu is easy. The content of the users menu (located in Program Files/TSplus/UserDesktop/mainmenu.mnu) is modifiable by the administrator using Notepad:



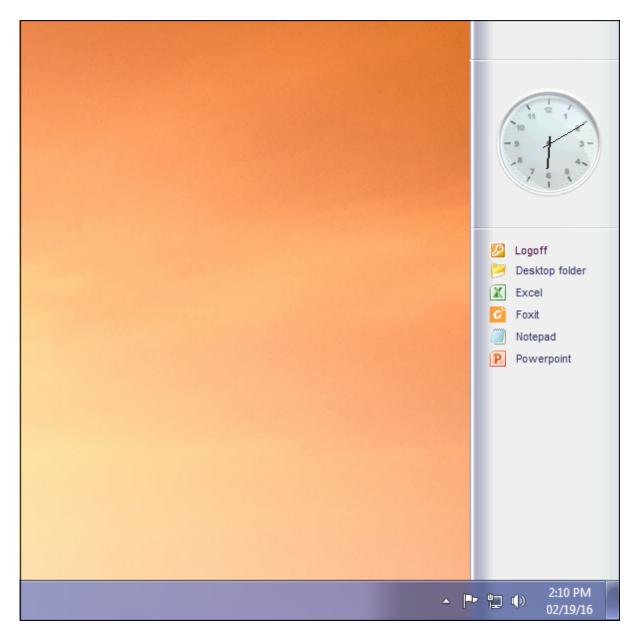
###Seamless connection program

On the applications tile of the AdminTool the administrator can select 3 different styles of Remote Desktop TSplus Taskbar. The TSplus Taskbar is extremely useful when a session is run with the Seamless TSplus connection program. The user can launch remote applications with one click on the TSplus taskbar and still have the full local Desktop available.

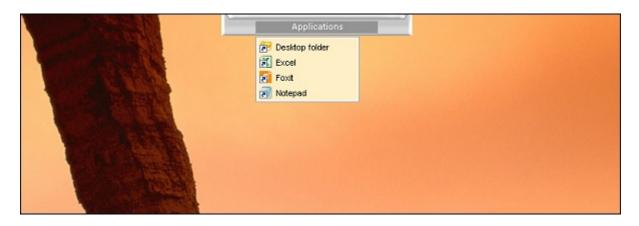
Right-side Blue theme taskbar



Right-side Silver theme taskbar



On Top taskbar



Overlapping the Windows taskbar with the Seamless connection client

If you want your maximized applications to overlap the Windows taskbar, click on this box, on the Seamless client tab:

Wind	lows	Clier	nt Gen	erat	or				_ ×
General	Display	Remot	e Desktop o	lient	Seamless client	Local resources	Program	Security	Load-Balancing
Specify	your pre	fered Sea	amless Color						
	OBlue	ŧ	() Pink		Green (defa	ult color)			
					ne transparency server and on th				
-When n	⊖ Don	't hide the	ote Applicati e local taskb ocal taskbar	ar					
	lf, you	r sytem is	W10, 2012	-R2 or		to W7 or /W2008 amless one	1		
	This set	ting appli	ies only to th	ie Sea	mless client				
Client loca	tion:	C:\Use	rs\Admin\D	esktop		Browse			Create Client
Client nan	ie:	john.co	nnect						



Back To Top

###Thin-client or any RDP based connection program

With the AdminTool, the Administrator can easily decide what will be the default Remote Desktop theme the user will see when opening a session. He has the choice between 4 different styles of full screen Remote Desktop. The standard Microsoft Remote Desktop can also be used if preferred.

Because these TSplus Desktops are full screen desktops, the user's display is entirely filled

when a session is opened from dedicated thin-clients, any RDP based client, or accessed from a web page or TSplus Remote Desktop clients.

There are benefits over a standard Remote Desktop. It enhances the server security (no START button neither full control of the Desktop).

Standard Microsoft Remote Desktop

18 1	Splus - Administration Console						- 🗆 X
		Remote Access Man	agement Console				
ŵ	НОМЕ	+ Add Application	C Edit Application	X Remove Application	<	>	Assign Application
口 令 ⑤	APPLICATIONS Publish Users PRINTER WEB	Desktop, Taskbar, Floating Par Microsoft Remote Desktop Published Applications Notepad Foxit		Microsoft R Select which use application: All authentica	emote Des rs and grou sted users	ktop User ups will b	n to Edit or Assign users/groups to it r Assign – 🗆 X e able to see and run this
ୁ ଜୁ	FARM SESSIONS SYSTEM TOOLS ADVANCED		9 - 0000 (0000)	Specified use Users and Grou DESKTOP-SCVIN	ps	sdr	
ŝ	ADD-ONS LICENSE			Add		Remo	ve Cancel



- The user has a complete desktop including Start Button and full control of the desktop
- To assign to complete desktop, just assign the Microsoft Remote Desktop application.

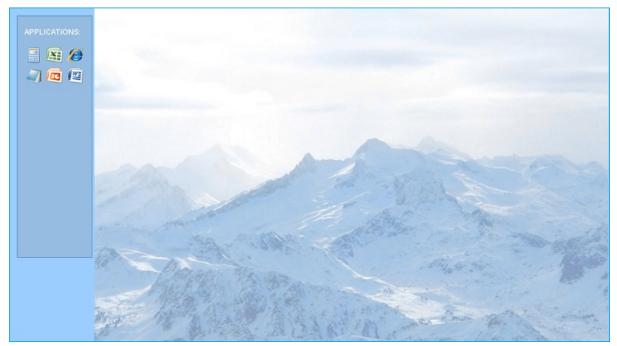
In order to change the Desktop themes, you will have to assign the TSplus Remote Taskbar and choose between the 3 suggested themes:

Taskbar Theme P	reference	-
Select your preferred TSplus		
O Use Blue taskbar then	ne as default	
O Use Silver taskbar the	eme as default	
O Use On Top taskbar th	neme as default	
Use Desktop theme of	ne as default	
O Use Desktop theme tw	wo as default	
O Use Logon theme as a	default	
Application working area w	within the selected th	ama
	within the selected in	leme
Full screen		
Do not overlap the loc		
Do not overlap the Blu	ue or Silver bar	
Replace loss /w	alloaner on the Des	ton themes
Replace logo/wa Minimize button Minimize Buttons preference	allpaper on the Des	
Minimize button		
Minimize button Minimize Buttons preference	s Preferenc	Ce Justify right

TSplus Desktop theme one



TSplus Desktop theme two



TSplus logon theme



Customized theme

For each theme, the Administrator can customize it and for example, display the Corporate logo. He can also add his own Desktop wallpaper by selecting one of the Desktop themes and by clicking on the Replace logo/wallpaper button to select your .jpg file, for example:

cynar Ihama P	reference	-
elect your preferred TSplus		
Use Blue taskbar ther		
OUse Silver taskbar the		
O Use On Top taskbart		
O Use Desktop theme o		
O Use Desktop theme t		
O Use Logon theme as	default	
Application working area v	within the selected t	heme
Full screen		
Do not overlap the loo	cal taskbar	
Do not overlap the Bl	ue or Silver bar	
Replace logo/w	allpaper on the Des	ktop themes
inimize buttor		
inimize buttor	ns Preferen	
inimize buttor linimize Buttons preference	ns Preferen	© Justify right
inimize button inimize Buttons preference Justify left On the screen top otification area	Center O Center O On the scree A (Systray)	© Justify right
inimize button linimize Buttons preference O Justify left O n the screen top	Center O Center O On the scree A (Systray)	© Justify right

- You can add your own Desktop wallpaper by selecting one of the Desktop themes and by clicking on the Replace logo/wallpaper button to select your .jpg file, for example:



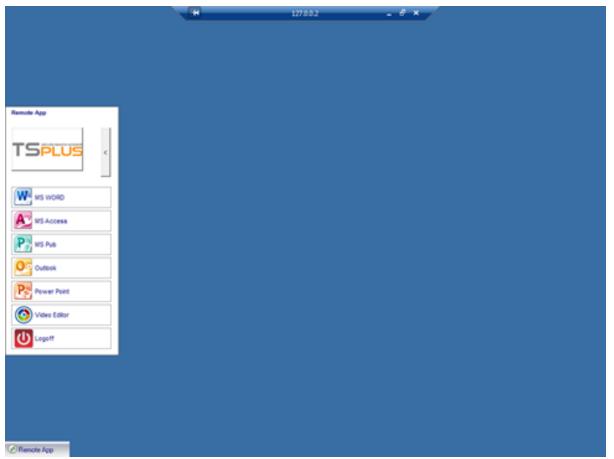
RemoteApp On Client Feature

In the past the generated TSplus Portable client was the usual method for a user to start applications. The 10.50 release introduces **an icon in the notification area** which gives to each user the list of all of his Remote Applications. Within this application list, the user can select the one he wants to start.

This is a new way for administrators to deliver remote applications (referred to as "RemoteApps") to their users. Specifically, RemoteApp On Client enables a straightforward publishing process that allows applications installed directly on the server to be provided to users, allows RemoteApp programs to run side-by-side with local programs, and offers integration with a custom "launcher" application to make it simple for users to find and launch RemoteApp programs.

The user Application list will also appear in the **Start menu** under **All Programs** in a folder called **My Remote Applications**. To deploy this new amazing TSplus capability is simple: The Administrator have generated new connection clients and allowed it with the AdminTool. This guide will explain step by step what will happen when the administrator will enable this new feature and will deliver to his users a new generated connection client.

Example: The user "Laura" is using TSplus to access her remote application. To do so, she is using a generated client named **LauraPortableClient.exe**. When she runs it on her PC she gets the following result:



However, the administrator did provide her a new one, created with the TSplus 10.50 release. She will have to run it at least once to benefit from the new

RemoteApp On Client feature

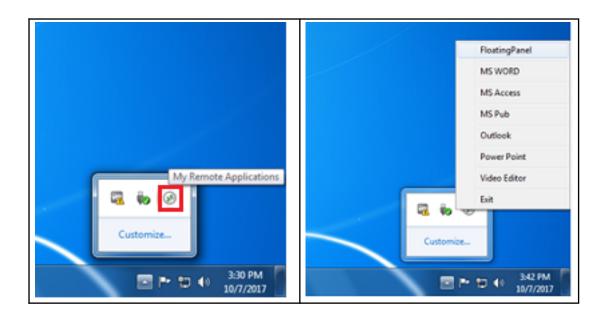
. When the administrator is adding/removing application to a user, such change will be set on the server side at the next logon. It means that the current session will not reflect such modification. The Advanced tab of the AdminTool has an option to enable or to disable this RemoteApp On Client feature, by default, it is enabled:

	EACCESS	5		
	Backup / Restore you	ur Server Parameters		
	Advanced Settings	Name	Value	^
WEB WEB	Security Session	Desktop for all users Application Command Line	No No	
FARM	Contextual menu Logs	Remote Application Menu Remote Application Menu Title Background Color	Default (Yes) Default (My Remote Appli Default (10841658)	
SESSIONS		Use "All Users" desktop shorcuts Fallback application path if no assigned applicatio		
SYSTEM TOOLS		Disable Notification Center Disable the daughter process handler Force logoff if no assigned application	Default (Yes) Default (No) Default (No)	
ADVANCED		Printer: Reset User Settings on logon Allow screen saver Download Target Folder	Default (No) No Default (%DESKTOP%)	
ት ADD-ONS		Upload Target Folder URL on Client - Enable "tel:" protocol	Default (%DESKTOP%) Default (No)	
		Use Windows Shell Force WinXshell Add a delay when the session is opening Daugther Process Wait Duration	Default (Yes) Default (No) Default (200) Default (200)	l
		File Browser Delete file after transfer Use WinXshell when required	Default (Use Windows Ex Default (No) Yes	

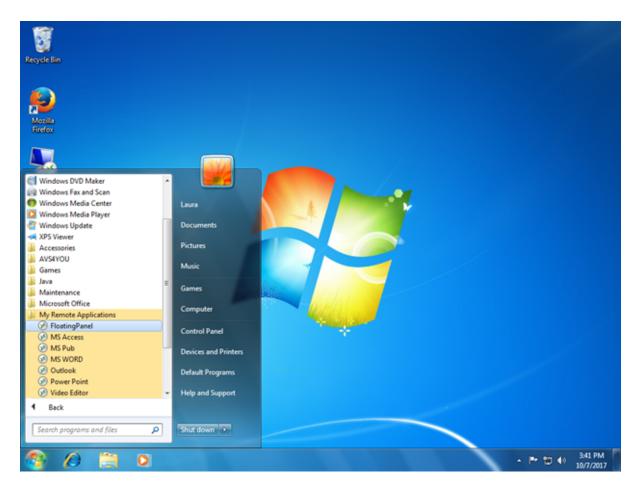
You can change the menu name as you wish, by clicking on the Remote Application Menu Title below, and adding it on the value box:

1 TSplus - Administration Console - 12	.20.1.27			- 0	\times
TSPLUS Re	emote Access Managem	nent Console			
	📀 Backup / Restore your Se	rver Parameters			
	Advanced Settings	Name	Value		
S web	Security	Desktop for all users Application Command Line Remote Application Menu	No Default (Yes) Default (Yes)		
FARM		Remote Application Menu Title	Default (My Remo 10841658 × No)]
		Remote Application Menu Title	40)		
SYSTEM TOOLS		Description: Title to display in Remote Application Menu	No) 6DESKTO	P%)	
ADVANCED			%DESKTO /es) No)	P%)	
슈 ADD-ONS			D) 2000)		
ତିନ୍ଦ LICENSE		Value: My Remote Applications	Jse Wind	lows Explo	
		Save	Cancel		

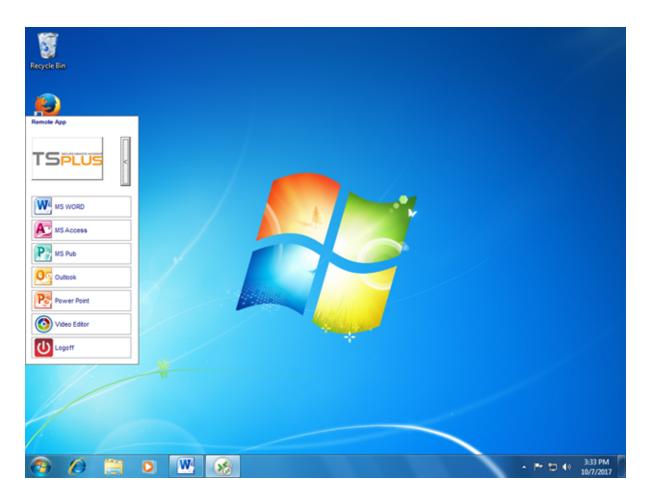
What will happen on her PC when she will run once her new generated client: She will see a new icon in the Notification Area of her local task bar.



She will also see a new entry within her Start menu Program list named "**My Remote Applications**":



She will now be able to select one of these listed applications and to start it as a RemoteApp. She will not need to use the provided LauraPortableClient.exe generated client. For example, if she selects the Floating Panel, she will get this result:



Technical background behind this new technology.

The new generated client of the 10.50 release is adding several files within C: \Users%UserName%\RDP6 folder of the local PC's user profile.

MyRemoteApp.exe and MyRemoteApp.bin are the program codes which are started to create the new icon in the notification area and the new entry in the All Programs list of the Start button.

MyRemoteApp.ini is a file received from the server. It is providing the details of each application which are assigned to this user on the server side. It is updated at each new connection to the server. Usually, it takes 30 secondes after each logon to receive this file from the server. RemoteApp.txt is providing the name of the last generated client started on this PC.

Organize 👻 📄 Oper	Share with 👻 New folder		8	: • 🔟	0
🔆 Favorites	Name	Date modified	Туре	Size	
E Desktop	🌉 bkgsc.bmp	4/2/2016 4:16 PM	Bitmap image	8 KB	
〕 Downloads	🛃 bkgscblue.bmp	4/2/2016 4:16 PM	Bitmap image	8 KB	
Recent Places	🛃 bkgscgreen.bmp	4/2/2016 4:16 PM	Bitmap image	8 KB	
	🛃 bkgscpink.bmp	4/2/2016 4:16 PM	Bitmap image	8 KB	
🥞 Libraries	ConnectionClient.bin	10/2/2017 6:52 PM	BIN File	568 KB	
Documents	S ConnectionClient.exe	7/7/2017 4:19 PM	Application	96 KB	
🚽 Music	S ConnectionClientold.exe	7/7/2017 4:19 PM	Application	96 KB	
Pictures	DroidSansFallback.ttf	10/16/2015 9:51 AM	TrueType font file	3,749 KB	
🛃 Videos	No ico2.ico	4/2/2016 4:16 PM	Icon	161 KB	
	🐼 icon.ico	4/2/2016 4:16 PM	Icon	54 KB	
💻 Computer	laura-PortableClient.txt	10/7/2017 3:20 PM	Text Document	1 KB	
🚮 Local Disk (C:)	libmupdf.dll	11/2/2015 8:52 AM	Application extens	5,061 KB	
	MyRemoteApp.bin	10/2/2017 6:52 PM	BIN File	6 KB	
📬 Network	MyRemoteApp.exe	7/7/2017 4:19 PM	Application	96 KB	
	MyRemoteApp.ini	10/7/2017 3:28 PM	Configuration sett	2 KB	
	PdfFilter.dll	11/2/2015 8:53 AM	Application extens	188 KB	
	PdfPreview.dll	11/2/2015 8:53 AM	Application extens	196 KB	
	RemoteApp.bt	10/7/2017 3:28 PM	Text Document	1 KB	
	No. Session.rdp	10/7/2017 3:32 PM	Remote Desktop	2 KB	
	Fig. SumatraPDF eve	11/2/2015 8-53 AM	Application	1 588 KR	

Comments:

If the user has administrator right on his own PC, **MyRemoteApp.exe** will be started automatically at each reboot and the Start button will be updated too. Else, the administrator must run once the new generated client "As Administrator" to enable the new feature. Doing so he will create the proper registry entries in HKLM. If a user is connecting to only one server, this new system is perfect. However, if he is using several connection clients to open sessions on different servers you should keep in mind that the file **MyRemoteApp.ini** will be updated with the values of the last connection. It can be confusing for the user and in such deployment case we recommend no to use this new feature.

Remote App Plugin

Since the new 8.40 version of TSplus, there is no need anymore for a Java plugin to be installed on the client browser. You can now access the Windows RemoteApp client by downloading and installing a small Windows plugin via the Web Portal. This operation is fast and needed only once per client.

User name: Password: Domain: • HTMLS • RemoteApp Log on Windows Plugin not found Download Plugin Install this plugin	
Install this plugin Then dick on 'Log-on' again	

You can also install it on the C:\Program Files (x86)\TSplus\Clients\www\RemoteAppClient folder.

When using firefox, this message will be displayed on your first connection. If you choose the "remember my choices" option, the notification will be disabled upon future connections

La	unch Application
	This link needs to be opened with an application. Send to:
	Windows Connection Plugin
	Choose an Application <u>C</u> hoose
	<u>Remember my choice for remoteapp links.</u> This can be changed in Firefox's preferences. OK Cancel

Note: Since TSplus 12.40, RemoteApp client setup and the <u>The Client Setup Program</u> have been merged and can be deployed with one single setup - so if you download the RemoteApp Client Setup, there will be no need to download the Connection Client one.

RemoteApp and Seamless Connection Clients

You can choose between 3 display modes on the general tab of the client generator:

eneral Display	Remote Desktop client	Seamless client	Local resources	Program	Security	Load-Balancing
erver Server	address		Port number			
192.1	68.1.254		3389			
ser						
Logon	8		Password			
John			••••			
Domair	n name (without extension)					
TSplu]			
referred displa	v mode					
	y mode mote Desktop client	Remote APP	client	◯ Seam	less client	
referred displa () Re		Remote APP	client	⊖ Seam	less client	
() Re				0.111		Fiber optic
() Re	mote Desktop client	ons for better perfo		0.111		Fiber optic

###RemoteApp connection client

Unlike the Seamless client, the RemoteApp connection client does not depend on the transparency color settings. This allows for perfect application display as well as native Windows behavior.

- On the Client side, the installation of RDP6 or above is required.
- On the Server side, TSplus must be installed on a machine running Windows 7 to Windows Server 2019. Note: RemoteApp is not supported on Windows 10 1803 et 1809 Home Windows 2019 Essentials Editions.

You can change the RemoteApp client display and Printing preferences on the Web tab of the Admintool:

TSplus - Administration Console	-	
TSPLUS	Remote Access Management Console	
Ф номе	P Web Portal Design	
	web Polica Design	
	Web Portal Preferences	
S WEB	Applications Portal	
FARM		
	😌 Web Credentials	
SYSTEM TOOLS		
ADVANCED	RemoteApp Client	
앉 ADD-ONS	HTML5 Client	
	R HTMLS Top Menu	
Deverte	Area Clicent	_ ×
Remote	App Client	
Display		
Resolution:	RemoteApp	•
Pixel Depth:	32 bits	•
i sus Dopan	52 513	<u> </u>
Web Printing P	references	
Choose your w		-
-	l be used for all web connections using RemoteApp client. I not be used for HTML5 connections.	
Pelp.	Reset 🔍 Preview 🧟 Sar	ve

Minimized applications can be found directly inside the Windows taskbar, like a local application. In this example, Firefox and Paint are launched locally; Notepad, Word and Foxit are launched remotely.



The Seamless connection client works on every Operating System, regardless of the version on the client or on the server side. When connecting remotely in seamless mode, you can access your applications as if they were installed locally on your computer. A transparency color can be set manually to insure your application will appear perfectly. You can choose from green, blue, or pink.

Wind		Client Genera				
General	Display	Remote Desktop client	Seamless client Local resources	Program	Security	Load-Balancing
Specify	your pref	ered Seamless Color				
	OBlue	O Pink	Green (default color)			
		mless client is based on o or must be identical on the	one transparency color. e server and on the client.			
When n	naximizing	a Remote Application				
	-	hide the local taskbar				
	Over	lap the local taskbar				
	If, your	sytem is W10, 2012-R2 of	s working fine up to W7 or /W2008 or W2016 instead of the Seamless one			
	This sett	ing applies only to the Se	amless client			
Client loca	ation:	C:\Users\Admin\Deskto	p Browse			Create Client
	ne:	iohn.connect				Create Client

The Seamless Client is based on one transparency color selected by the Administrator. Since the Remote Desktop background color is painted with the selected transparent color, the Microsoft Remote Desktop is not displayed anymore and the user will just see his published applications.

Warning: Installation default is green and should work fine with most applications. We offer you the choice between 3 transparency colors: Pink, Green and Blue. Of course, the server and the connection clients must use the same color. Some elements on an application can also not be visible anymore because of the transparency color.

For both the Seamless and the Remoteapp connection clients, you can choose to publish one unique application to be launched seamlessly at the user's logon. You can also publish applications with the <u>TSplus Remote Taskbar</u>, the Floating Panel or the Application Panel.

Run Windows client under Proxy environment

Usually the SSH package support HTTP(S) proxies and this should be sufficient to overcome most known proxies.

However, there are existing very difficult cases, where the proxy environment can not be properly recognized, is hidden from third party software or the target servers are behind reverse proxies.

For such difficult cases the software contains Non-SSH solution called "Rescue mode".

If you can establish HTML5 connection, then you can be sure this software will help you to establish native socket connections through Websocket(FF, Chrome, Opera, IE10 etc) or XHR (IE6-IE9).

Be careful, some proxies allow <u>Websocket/XHR</u> traffic only via HTTPS layer, so use https address instead of http.

If proxy does not ask for proxy authentication and you can access pages via browser:

- 1. Open http(s)://yourserver.com_/software/html5/jwres/__
- 2. Wait for successful connection (and authorize Java execution if asked)
- 3. Click on the red text "open the link" to open the working web access page
- 4. Use Windows client access as usual

If proxy requests proxy authentication and you can access pages via browser:

- 1. Open http(s)://yourserver.com_/software/html5/jwres/___
- 2. If the proxy requests for authentication for java applets, press "cancel"
- 3. Click on "Download LocalWebserver", and execute it after successful download, that will start local http server on port 18888
- 4. Click on "Force Applet loading from http://localhost:18888", this will reload the page with loading of jars from local http server
- 5. Wait for successful connection
- 6. Click on the red text "open the link" to open the working web access page
- 7. Use Windows client access as usual

Securing a TSplus server

Overview

Securing any server is a never-ending story where every expert could add another chapter. TSplus benefits from and is compatible with existing security infrastructure in a company (Active Directory, GPOs, HTTPS servers, SSL or SSL telecommunication systems, VPN, access control with or without ID cards, etc). For customers who want to easily secure their servers, TSplus offers a set of simple and effective ways to enforce good levels of security.

Changing the RDP port number and setting up the firewall

With the AdminTool, you can select a different TCP/IP port number for the RDP service to accept connections on. The default one is 3389. You can choose any arbitrary port, assuming that it is not already used on your network and that you set the same port number on your firewalls and on each TSplus user access programs.

TSplus includes a unique port forwarding and tunneling capability: regardless the RDP port that has been set, the RDP will also be available on the HTTP and on the HTTPS port number!

If users want to access your TSplus server outside from your network, you must ensure all incoming connections on the port chosen are forwarded to the TSplus server. On the Home tab, click on the pencil button next to the "RDP Port":

🗱 TSplus - Administration Console		– 🗆 X
TSPLUS	Remote Access Management Console	
Ф номе		
	\Box	\bigcirc
	Computer name: DESKTOP-SCVIIVH Private IP 192.168.1.22	http://localhost
🕲 web	Public IP 78.	The built-in HTTP server is listening on port 80
FARM	T TSplus X	The HTTPS server is listening on port 443
	Enter a port number 3389	
SYSTEM TOOLS	Syster Save Cancel 37:05 PM	
202 ADVANCED	Version - You are using the latest version	
ረርት add-ons	✓ License Activated - Enterprise edition - 25 users	
	Send of support date:	
	English	() Help

Change the RDP port and save.

Server side security options

The AdminTool allows you to deny access to any user that is not using a TSplus connection program generated by the administrator. In this case, any user that would attempt to open a session with any Remote Desktop client other than the TSplus one (assuming he has the correct server address, the port number, a valid logon and a valid password) will be disconnected automatically.

The administrator can decide that only members of the Remote Desktop User group will be allowed to open a session.

The administrator can decide that a password is mandatory to open a session.

Through setting the applicable local Group Policy, the administrator can specify whether to enforce an encryption level for all data sent between the client and the remote computer during a Terminal Services session. If the status is set to Enabled, encryption for all connections to the server is set to the level decided by the administrator. By default, encryption is set to High.

The administrator can also set as a rule that only users with a TSplus connection client will be able to open a session.

Any incoming access with a standard RDP or a web access will be automatically rejected.

Sessions Permissions

You can find multiple advanced security options if you click on the Sessions - Permissions tab:

-₩Т	Splus - Administration Console	_	Х
	TSPLUS	Remote Access Management Console	
ŵ	HOME	Microsoft Remote Desktop Client Restrictions	
	APPLICATIONS	Deny access from Microsoft RDP client Deny access from Outside (only LAN)	
¢	PRINTER	Server advanced security options	1
S	WEB	Limit access to the members of Remote Desktop Users Encrypts end-to-end communications	
₽	FARM	Encycle enclosed communications Block all incoming access to this server Disable UAC and enhance Windows access	
گ	SESSIONS	Allow Windows Key	
	Settings	Allow only users with, at least, one assigned application Allow CUT/PASTE within a session	
	Permissions		1
	Client Generator	Web Portal Access Restrictions	1
ez,	SYSTEM TOOLS	No Restriction Web Portal Access is mandatory for everyone	
鐐	ADVANCED	 Web Portal is mandatory, except for Admins Prohibit the Web Portal for Admins accounts 	
చి	ADD-ONS		1
©7	LICENSE		

Allow access from Microsoft RDP client for everyone:

Allows every user to connect using mstsc.exe.

- Allow access from Microsoft RDP client for Admins only: Allows only Admins to connect using mstsc.exe.
- **Deny access from Microsoft RDP client:** Prevent anyone to be able to connect using mstsc.exe.
- **Deny access from Outside:** It means that only private IPs from LAN will be able to open a session.
- Limit access to the members of Remote Desktop users: This limit applies only to this local group of users (which you can see by clicking on the <u>Users and Groups tile</u>.
- Encrypts end-to-end communications: High Encrypts client/server communication using 128-bit encryption. Use this level when the clients accessing the terminal server also support 128-bit encryption.
- Block all incoming access to this server: All alive sessions will remain active, while all incoming connections attempts will be blocked. Make sure that you can physically access the console of the server if you check this box. Do not use this option if your server is hosted on a Cloud environment.
- **Disable UAC and enhance Windows Access:** Deactivates the User Accounts Controls, remove all unwanted security pop-ups from Windows. users limitation (messages) while launching applications.
- The "Allow Windows Key" box allow the use of the Windows keys and combinations inside a TSplus session.
- Allow only users with, at least, one assigned application: User with one application and more are allowed to open a session.

• Allow CUT/PASTE within a session: unchecking this box will disable the CTRL C/CTRL V commands

Web Portal Access Restrictions

- No Restriction
- Web Portal is mandatory for everyone: users can only connect via the Web Portal.
- Web Portal is mandatory, except for Admins: users can only connect via the Web Portal, except Administrators.
- Prohibit the Web Portal for Admins accounts: Administrators cannot connect via the Web Portal.

Hiding the server disk drives:

The AdminTool includes a tool that enables hiding the server disk drives to prevent users from accessing folders through My Computer or standard Windows dialog boxes. On the Sessions - Settings tab, click on "Hide Disk drives" :

TH TS	Splus - Administration Console - 🛄	<i>a</i> –	×
	TSPLUS Rem	note Access Management Console	
	номе	Session Management settings	
455 - 40. 119-	APPLICATIONS PRINTER	Session Opening Preference	
Q	WEB		
₽	FARM	Open Files on Client Side	
2	SESSIONS	C Open URLs on Client Side	
	Settings		
	Permissions		
	Client Generator	🤯 Hide Disk Drives	
Z	SYSTEM TOOLS		
鐐	ADVANCED	C Seamless color settings	
ది	ADD-ONS		
©7	LICENSE		

This tool works globally. This means that even the administrator will not have a normal access to drives after the settings have been applied. On the example below, all drivers have been selected with the "select all" button, which will check all the boxes corresponding to drives that will be hidden to everybody:

Hide serve	r drives 📕 🗕 🗙					
☑ Disk A:\	☑ Disk N:\					
☑ Disk B:\	☑ Disk O:\					
Disk C:\	☑ Disk P:\					
☑ Disk D:\	☑ Disk Q:∖					
☑ Disk E:\	☑ Disk R:\					
☑ Disk F:\	☑ Disk S:\					
🔽 Disk G:\	☑ Disk T:\					
☑ Disk H:\	☑ Disk U:\					
☑ Disk I:\	☑ Disk V:\					
☑ Disk J:∖	☑ Disk W:∖					
🔽 Disk K:\	☑ Disk X:\					
☑ Disk L:\	☑ Disk Y:\					
☑ Disk M:∖	📝 Disk Z:\					
Hide selected drives						
Select all	Unselect all					

Notes: This functionality is powerful and does not disable the access to the disk drives. It just prevents the user to display it.

The tool flags the disks drives as hidden, but it also adds the HIDDEN property to the entire root folders and users list in Document and Settings.

If the administrator wants to see these files he must:

- 1. Type the disk drive letter. For example: **D:<ENTER>** which will take you to the D: drive.
- 2. Turn on SHOW HIDDEN FILES AND FOLDERS in the folder view properties.

Administrator Pin Code

The Administrator can secure the Administrator Tool access by setting a pin code which will be asked at every start, on the Advanced tab of the AdminTool, under the Product Settings:

ћ номе					
APPLICATIONS	Backup / Restore	your Server Parameters			
PRINTER	Advanced Settings	Name	T Splus - Edit Setting	×	
WEB	Security	Administrator pin code Use RDS role AdminTool background col AdminTool Language	Administrator pin code		
FARM			AdminTool will ask for a password if this value is not empty.		
SESSIONS					
3 ADVANCED			Value:		
중 ADD-ONS			1234		
			Save		

TSplus Advanced Security Ultimate

Since TSplus 11.40 version, you will find a one-of-a-kind Security Add-on Tool, which you can launch on the Add-Ons tab:

TSplus - Administration Console	- 🗆 X
TSPLUS	Remote Access Management Console
 ↔ HOME ▲ APPLICATIONS ➡ PRINTER 	TSplus Advanced Security - Protect your server Protect your server from brute-force attacks and foreign intrusions. Block ransomwares before they destroy your files. Restrict users access and lock them in a highly secured environment.
 S web I farm ∠ sessions √ system tools 	Wo-Factor Authentication - Confirm your users' identity Passwords can be lost, stolen by phishing attacks, and very often they can even be cracked in a matter of minutes. Two-Factor Authentication solves this problem simply and effectively, and provides an additional security layer - sending a code to the user mobile device.
👸 ADVANCED	II. ServerGenius - Monitor your server
였 add-ons ⓒ규 license	Server Genius helps to optimize software resources and to reduce unnecessary costs. Give facts and data about server usage (CPU, Memory, I/O, Disks). Track changes, resources usage and events with real-time email alerts.

🔮 TSplus Advanced Security × TSplus Advanced Security - Ultimate Protection П номе Keep threats away from your Windows system. Prevent, protect and fight cyber attacks. **Q** EVENT VIEWER 21 Oct 16:52:53 🕓 A logon request has been granted for user WIN-A1L00CN0E56\Laura because WIN-A1L00CN0E56\Laura is whitelisted 21 Oct 16:52:53 A connection has been authorized for user WIN-A1L00CN0E56\Laura from computer because this feature is not enabled for this user 21 Oct 16:52:53 7 No session configuration was applied to user's session WIN-A1L00CN0E56\Laura because the feature is not enabled for WIN-A1L00CN0E56\Laura IP ADDRESSES 🧭 21 Oct 16:52:53 🧚 No session configuration was applied to user's session WIN-A1L00CN0E56\Laura because the user is whitelisted PERMISSIONS 21 Oct 16:52:36 Protection against Ransomware is up and running WORKING HOURS ★ SECURE DESKTOPS System audit - No issue found on 10/21/2019 5:09:36 PM **ENDPOINTS** \oslash Version 4.3.10.16 - You are using the latest version Trial License 10 days - Ultimate Protection edition \oslash SETTINGS English

Which brings powerful features, documented on this page.

The Brute-Force Attacks Defender role on the Web Portal is described on this page.

Two Factor Authentication

Since TSplus 12 Version, you can enable two-factor authentication as an add-on for your TSplus Web Portal.

	х
Protect your account with 2-step verification	
Display the verification code using an authentication app	
 Open the authenticator app on your mobile phone. Scan the QR code displayed below: 	
Or receive your verification code via SMS	
 Type your phone number below, using the international phone numbers format (e.g. +14155552671): 	
 Click Send SMS button to register your phone number and receive your verification code. 	
Receive SMS	
Validate your verification code	
Validate	

More information on this amazing new feature can be found on this page.

SSL Certificates

SSL Certificates process is detail on these pages:

- HTTPS, SSL & Certificates Tutorials.
- TSplus provides an easy-to-use tool to generate of a free and valid SSL certificate: <u>Free and</u> <u>Easy-to-install SSL Certificate</u>
- Choose your <u>Ciphers Suites to enhance Security</u>.

TSplus access program security options:

The TSplus client generator gives the capability, on its Security tab, to lock the TSplus client to:

A specific PC name. It means this program will not be able to start from any other PC.

A physical drive serial number (PC HDD or USB stick). This is a very easy and powerful way to set a high level of security. The only way to connect is with a specific client, and this specific client can only start on a specific USB stick or PC HDD. Some of our customers are delivering fingerprint-reading USB sticks to each of their users and each generated program is locked to the device serial number. This way, they can restrict access to the client's program itself, as well as ensuring it cannot be copied off the USB stick and used elsewhere.

Wind	dows	Client Genera	tor				_ ×		
General	Display	Remote Desktop client	Seamless client	Local resources	Program	Security	Load-Balancing		
Advanced client security options									
Ω	Lock	it on PC name							
	WIN-A1	LOOCNOE56							
	Lock	it on serial number							
	303119	124							
These settings apply to all kind of connection client: - Remote Desktop client - Seamless client - RemoteApp client Time limit: Disable this generated client after some days (for exemple 15 days) No limit Number of days from the first use date of this generated client Deny user from saving credentials									
Save usemame only Encryption V2									
Client loca	ation:	C:\Users\Admin\Desktop	0	Browse			a . a		
Client nan	ne:	john.connect					Create Client		

For more security feature informations, check <u>TSplus Portable Client Generator documentation</u> and our FAQ.

Server Management

On the Home tab of the AdminTool, you can see all the needed information about your TSplus server:

🐺 TSplus - Administration Console		– 🗆 X
TSPLUS	Remote Access Management Console	
М номе		
	P	\bigcirc
	Computer name: WIN-A1L00CN0E56 Private IP 192.168.	http://localhost
🕤 WEB	Public IP 78.193. RDP port 3389	▶ □ 5 The built-in HTTP server is listening on port 80
FARM	Connections: 1	The HTTPS server is listening on port 443
	Q Session Manager	
SYSTEM TOOLS	System Audit - No issues found on 1/7/2020 4:27:20 PM	
校 ADVANCED	Version 12.60.1.4 - You are using the latest version	(j) Read changelog
Հ굿 ADD-ONS	O License Activated - Enterprise edition - Unlimited users	
	End of support date: 7/11/2022	
	English	(7) Help

Changing the RDP port number and setting up the firewall

With the AdminTool, you can select a different TCP/IP port number for the RDP service to accept connections on. The default one is 3389. You can choose any arbitrary port, assuming that it is not already used on your network and that you set the same port number on your firewalls and on each TSplus user access programs.

TSplus includes a unique port forwarding and tunneling capability: regardless the RDP port that has been set, the RDP will also be available on the HTTP and on the HTTPS port number!

If users want to access your TSplus server outside from your network, you must ensure all incoming connections on the port chosen are forwarded to the TSplus server.

1 TSplus - Administration Console		– 🗆 X
TSPLUS	Remote Access Management Console	
Ф номе		
	\Box	\bigcirc
	Computer name: DESKTOP-SCVIIVH Private IP 192.168.1.22	http://localhost
© web	Public IP 78. RDP port 3389	▶ □ 5 The built-in HTTP server is listening on port 80
FARM	Til TSplus ×	The HTTPS server is listening on port 443
SESSIONS	Enter a port number B389	
SYSTEM TOOLS	Syster Save Cancel 37:05 PM	
🔯 ADVANCED	Version - You are using the latest version	
ረጉ ADD-ONS	✓ License Activated - Enterprise edition - 25 users	
	Send of support date:	
	English •	(?) Help

Management of users and sessions

The session manager is located right below the RDP port:

Remote Access Management Console	http://localhost D
Private IP 192.168.1.22 Public IP 78. RDP port 3389	▶ □ 5 The built-in HTTP server is listening on port 80
Private IP 192.168.1.22 Public IP 78. RDP port 3389	▶ □ 5 The built-in HTTP server is listening on port 80
Private IP 192.168.1.22 Public IP 78. RDP port 3389	▶ □ 5 The built-in HTTP server is listening on port 80
Public IP 78. RDP port 3389 🧪	The built-in HTTP server is listening on port 80
Connections: 1 Q	The HTTPS server is listening on port 443
System Audit - No issues found on 1/28/2019 11:39:01 AM	
Version 💶 🥵 You are using the latest version	
License Activated - Enterprise edition - 25 users	
End of support date:	
English	(7) Неір
	 Version You are using the latest version License Activated - Enterprise edition - 25 users

You can display your server's task manager, and you have the possibilities to active a remote control, disconnect, logoff or send a message to your users.

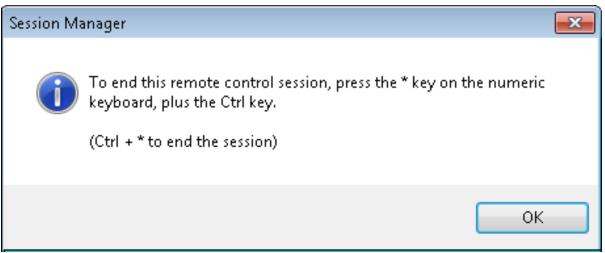
D	User	Domain	Status	Session	Client Name	Client Address
	Administrator		Active	Console		
2	john		Active	RDP-Tcp#0	ADMIN-PC	192.168.1.212
3	julia		Active	RDP-Tcp#1	DESKTOP-PRDBQT3	192.168.1.244

You can activate the remote control via a remote session with an admin account on the following Operating Systems:

- Windows Server 2008 R2
- Windows Server 2012 R2
- Windows Server 2016
- Windows Server 2019
- Windows 7
- Windows 8.1
- Windows 10 pro and above

On Windows XP, 2003, Vista, and 2008 there is no remote control button. On Windows 2012 and 8 a message appears advising you to update to 2012 R2 or 8.1.

When you activate the remote control for a user's session, this message appears, indicating the keyboard shortcut to end the session:



On the client side, this message appears to accept the remote control:

Remote Co	ontrol Request	×
?	admin-PC\Administrator is requesting to control your session remotely. Do you accept the request?	
	<u>Y</u> es <u>N</u> o	

You can also send a message to your user:

Image: Image: Message: Image: Mello, Image: Image: Image: <) User	Domain	Status	Session	Client Name	Client Address
Session Manager- Send Message Message title: Message fromAdministrator Message: Hello, Can you please disconnect your session?	Administr	ator	Active	Console		
Message title: Message fromAdministrator Message: Hello, Can you please disconnect your session?	john		Active	RDP-Tcp#0	ADMIN-PC	192.168.1.212
Hello, Can you please disconnect your session?		N	Message title:			
OK Cancel			Hello,	nect your session?		

Message sent on Server Side

			📁 Desktop
			📕 Notepad
			🚞 Shared F
			test
Message fromAdministra Hello,	tor	×	
Can you please disconr	nect your session?		

Message appearing on Client Side

The Users and Groups tab allows you to add/edit or delete users.

🐺 TSplus - Administration Console - 🛛		
	EACCESS	
М НОМЕ	Services	
		_
	😫 Users and Groups	
S WEB	Server Properties	
FARM	🔾 Windows System Toolkit	
	Eccal Group Policy Editor	
SYSTEM TOOLS	Event Viewer	
ស្ត្រិ advanced		
슈 ADD-ONS		
ලැ LICENSE		
	🗘 Reboot the Server	
SESSIONS SYSTEM TOOLS ADVANCED ADD-ONS	E Event Viewer	

See this documentation for more information.

• With the Session Management Settings (GPO) tab, you can set various connection settings for each session and user:

🗱 TSplus - Administration Console - 🔳	1.57	- 🗆 X
TSPLUS Re	mote Access Management Console	
С номе		
	Session Management settings	
	Session Opening Preference	
S WEB		
FARM	Open Files on Client Side	
SESSIONS	C Open URLs on Client Side	
Settings		
Permissions		
Client Generator	🥸 Hide Disk Drives	
SYSTEM TOOLS		
ADVANCED	Seamless color settings	
슈 ADD-ONS		

ession Time limit settings	-	
Terminate any disconnected session after	60000	Milliseconds
Maximum time allowed for any user session	Never	Minutes
Maximum time for any inactive / idle session	Never	Minutes
All disconnected sessions will be immediately terminated		
lser Reconnection options Only one session per user: The second session will capture the Only one session per user: The second session will be logoff Multiple session per user: At each logon the user will open a ne		0 0 0
The user must reconnect from the same device		
on W10 or 2016 server: To speed up user logon, you can disa	able "Per user services"	

Windows Server 2016 introduced a new "Per user service", which makes services start all processes per users, which slows the users logons time. Since TSplus 11.70 release, you can **disable per user services in order to speed up users logons**

Services and Properties

• The Windows Toolkit is an enhanced control panel, summarizing all the Windows Administration tools.

-₩ т	Splus - Administration Console	- 100	0			-	×
	TSPLUS	Remo	ote A	Access	Management Console		
仚	НОМЕ						
	APPLICATIONS		۵	Services			
	PRINTER		2	Users and	Groups		
S	WEB		000	Server Pro	perties		
≣⊡	FARM	- [Z,	Windows	System Toolkit]
2	SESSIONS		=	Local Gro	up Policy Editor		
ez,	SYSTEM TOOLS		e	Event View	ver		
鐐	ADVANCED						
ස	ADD-ONS						
©⊽	LICENSE						
			φ	Reboot th	e Server		
23	C:\Program Files (x86)\TS	plus\Us	serDes	ktop\file	s\godmode -	-	×
~	ightarrow 🔺 🔛 « Pro	gram F	iles (x	86) > T	plus → UserDesktop → files → V Ō		9
0	rganize 🔻				E-	= -	?
	- TSplus			^	Name		^
	Clients				Administrative Tools (12)		- 1
	UserDesktop				Create and format hard disk partitions		
	.lego				瘤 Defragment and optimize your drives 瘤 Diagnose your computer's memory problems		
	apilangs				Edit group policy		
	<u>22</u>				Eree up disk space by deleting unnecessary files		
	ico				續 Manage computer certificates 織 Schedule tasks		
	icons				En up iSCSI initiator		
	tmp				📸 Set up ODBC data sources (32-bit)		
	ico			- 64	Est up ODBC data sources (64-bit)		
	themes				證 View event logs 禮 View local services		
	Windows Defend	der			AutoPlay (3)		
	Windows Mail				Change default settings for media or devices		
	Windows Media	Player			Play CDs or other media automatically		
	Windows Multin	nedia Pl	latforr	m	🔜 Start or stop using AutoPlay for all media and devices		
	windows nt	Vi-			V Backup and Restore (Windows 7) (2)		
	Windows Photo				Backup and Restore (Windows 7) Backup and Restore data files or computer from backup (Windows 7)		
	WindowsPowerS				Restore data, files, or computer from backup (Windows 7)		~
20	8 items			*	<		>

• You can also launch the "Server Properties" tab to have an overview of the control panel.

TSplus - Administration Consol		×
TSPLUS	Remote Access Management Console	
	Services	
	2 Users and Groups	
S WEB	George Properties	
FARM	🄾 Windows System Toolkit	
	Eccal Group Policy Editor	
SYSTEM TOOLS	Event Viewer	
ស្ត្រី ADVANCED		
옶 ADD-ONS		
ලිසු LICENSE		
	🗘 Reboot the Server	

• You can see all the services on your server and their status on the Services tile.

1 TSplus - Administration Console	e - 1 (1994) (1)	- 🗆	×
TSPLUS	Remote Access Management Console		
 MOME APPLICATIONS PRINTER WEB FARM SESSIONS SYSTEM TOOLS ADVANCED 	 Services Users and Groups Server Properties Windows System Toolkit Local Group Policy Editor Event Viewer]
슈가 ADD-ONS ⓒ규 LICENSE	Reboot the Server		

Session Opening Preference

The session opening preference allows you to choose your shell session preference, your logon preferences, the background color of your sessions, add your own logo and rename it to your liking.

-₩ Т	Splus - Administration Console -	- 141.02 -	Х
	TSPLUS	Remote Access Management Console	
命 □	HOME	Session Management settings	
₽	PRINTER	Session Opening Preference	
O	WEB		
₽	FARM	Open Files on Client Side	
۵	SESSIONS	C Open URLs on Client Side	
	Settings		
	Permissions		
	Client Generator	🚫 Hide Disk Drives	
ଥ୍ବ	SYSTEM TOOLS		
鐐	ADVANCED	😳 Seamless color settings	
చి	ADD-ONS		
©⊽	LICENSE		

By default, on these logon preferences are enabled:

- The "Display progress bar during logon".
- **"Enable Time Zone Redirection**" which enables the client computer to redirect its time zone settings to the Remote Desktop Services session. If you enable this policy setting, clients that are capable of time zone redirection send their time zone information to the server.

🛺 Session Opening Preference —	×
Logon Preferences Display progress bar during the logon All users have a full Desktop Display last connected users Enable Time Zone Redirection Save	
Background Color Preference 10841658 Choose color Save Save	
Background Logo Preference Add a logo: Browse	
Session Name Preference RDP-Tcp Save new session name	
Use WinXshell alternate shell O Use Windows Shell	

You can also **set a full Desktop** for all your users and **get a display the last connected users** by ticking the corresponding boxes. You can **customize your users sessions** by adding a new Background Color, another logo or none and use the session name of your choice.

•

Since TSplus 11.70 release, you can use **TSplus WinXshell** as an alternative to the Windows shell. Following the October 10 Windows Update, administrators allowing their users to start a Remote Desktop saw the Windows shell as an issue. The main problem resides in the session opening/black screen issue when a complete desktop is assigned to multiple users on Windows 10 and Server 2016. It provides features and graphical experience similar to Windows 2016 Windows shell, such as the display of the 2016 Start button and taskbar. It is especially useful if you use Windows 10 or Windows 16 Operating systems, manage 10 users or more and wish to assign them a full desktop.

Backup and restore your server parameters

You can backup or restore your server parameters by clicking on the tile of the same name, on

the Advanced tab:

TSplus - Administration Consc	le -	- 🗆 🗙
TSPLUS	Remote Access Management Console	
М номе	Backup / Restore your Server Parameters	
	TSplus - Backup / Restore your Server Parameters X Backup your Server Parameters	
WEB WEB	Backup	
	Restore your Server Parameters	
FARM	No backup found 🤟 Restore	
SESSIONS		
SYSTEM TOOLS		
없 ADVANCED		
Հշ ADD-ONS		

Click on the Backup button to make a backup, which will be dated and added to the list of your restore points:

	Backup		
Restore your Server Paramet	Backup X		
2019-02-07_12-57-36	Backup completed	Restore	

The backup file can be found on the C:\Backupparam folder:

🏪 📝 📙 🖛 Local Disk (C:)						_		Х
File Home Share View								~ 🧃
← → × ↑ 🏪 > This PC > Local Disk (C:) >			ڻ <i>ب</i>	Search Local D	isk (C:)		Ą
i 3D Objects	^	Name	Date modified	Туре		Size		
E. Desktop		Backupparam	2/7/2019 12:57 PM	File f	older			
Documents		inetpub	2/6/2019 5:29 PM	File f	older			
🕂 Downloads		PerfLogs	4/12/2018 1:38 AM	File f	older			
TSplus_AdminTool_v12_PREVIEW_1		🔒 Program Files	11/15/2018 12:08	File f	older			
🚯 Freebox Server		Program Files (x86)	3/1/2019 2:03 PM	File f	older			
Music		Shared Folder	2/7/2019 12:18 AM	File f				
Pictures		tmp	2/21/2019 11:34 PM	File f				
Videos	- 54	Users	11/29/2018 1:18 PM	Filef				
Local Disk (C:)		Windows	2/22/2019 12:47 AM	Filef				
		wsession	2/21/2019 11:36 PM 11/13/2018 8:16 PM	File f			1 KB	
Backupparam		ang lang	11/15/2016 6:10 PW	Conr	iguration sett		IND	
backup-2019-02-07_12-57-36								
inetpub								
PerfLogs								
Program Files								
Program Files (x86)								
Shared Folder	\checkmark							
11 items 1 item selected								833 🖿

More information on this <u>documentation</u>.

Reboot your server

The "Reboot the server tab" allows you to reboot your server.

🕄 TSplus - Administration Console	- 100 m - 1	×
TSPLUS	Remote Access Management Console	
☆ HOME APPLICATIONS	Services	
	Users and Groups	
S WEB	Server Properties	
	E Local Group Policy Editor	
SYSTEM TOOLS	Event Viewer	
Հ굿 ADD-ONS		
ලි TICENSE	🗘 Reboot the Server	

How to setup Apache reverse proxy support of Websockets

1.

first of all change following variable to false www\software\html5\settings.js > W.xhrreverse = false; (if you don't change it to false, it will always try xhr instead websockets, what we don't want anymore)

2.

install Apache with proxy_wstunnel support (older Apaches without proxy_wstunnel are unsupported!)

3.

allow in Apache config (httpd.conf etc.) following modules. LoadModule proxy_module modules/mod_proxy.so LoadModule proxy_http_module modules/mod_proxy_http.so LoadModule proxy_wstunnel_module modules/mod_proxy_wstunnel.so

4.

let's assume you want to access html5 main portal via subfolder "/html5/" As example http:// your_ip_or_domain.net/html5/ And Tsplus is installed in intranet on server "intranetxyz" then add to the config (httpd.conf etc.) following

ProxyPass /html5 http://intranetxyz:80 ProxyPassReverse /html5 http://intranetxyz:80

ProxyPass "ws://intranetxyz:80/socket.io/websocket_https"

ProxyPass "ws://intranetxyz:80/socket.io/websocket"

ProxyPass "ws://intranetxyz:80/socket.io/flashsocket_https"

ProxyPass "ws://intranetxyz:80/socket.io/flashsocket"

5.

Restart Apache to take changes effect.

Two-factor Authentication

Two-factor authentication adds an extra layer of security and **prevents access to your users'** session even if someone knows their password.

A combination of two different factors is used to achieve a greater level of security:

- 1. something they know, a password.
- 2. something they have, a **device such as a smartphone with an authentication app installed.**.

You can use one of the following authenticator apps to proceed. These apps are available across a wide range of platforms:

- <u>Authy</u>
- Google Authenticator
- <u>Microsoft Authenticator</u>

Each time a user sign in to its remote session it will need its password and a verification code available from its mobile phone. Once configured, the authenticator app will display a verification code to allow him or her to log in any time. It works even if its device is offline.

OR you can decide to receive verification codes by **SMS**. In this case, you will have to create a free account on <u>Twilio</u>.

Two-factor authentication is available with **HTML5 and Remoteapp connections on TSplus Web portal only**, on **TSplus Mobile Web and Enterprise Editions**. This authentication mode does not support login through Remote Desktop client.

In order to provide an even safer solution, RDP connections are denied for 2FA enabled users.

As a prerequisite, TSplus server and Devices must be on time. See the <u>Time Synchronization</u> and <u>Settings</u> sections for more configuration information.

Activating the Two-factor Authentication Add-On License

The Two-Factor Authentication feature can be found on the Add-On tab of the AdminTool:

TSplus - Administration Co	nsole - 12.20.1.27 — 🗆	×
TSPLUS	Remote Access Management Console	
М номе		
	RDS-Knight - Protect your server	
	Protect your server from brute-force attacks and foreign intrusions. Block ransomwares before they destroy your files. Restrict users access and lock them in a highly secured environment.	
S WEB		
FARM	Wo-Factor Authentication - Confirm your users' identity	
SESSIONS	Passwords can be lost, stolen by phishing attacks, and very often they can even be cracked in a matter of minutes. Two-Factor Authentication solves this problem simply and effectively, and provides an additional security layer - sending a code t the user mobile device.	o
SYSTEM TOOLS		
😥 ADVANCED	ServerGenius - Monitor your server	
값 add-ons	Server Genius helps to optimize software resources and to reduce unnecessary costs. Give facts and data about server usage (CPU, Memory, I/O, Disks). Track changes, resources usage and events with real-time email alerts.	

It is available as a 30-day trial for 10 users. To activate your license, copy the serial number you can find at the bottom of the Home tile:

⊘ Two-factor Authentication Admi	inistration - TSplus —	□ ×	
$\overline{\mathbf{O}}$	Two-factor Authentication Administration		
슈 HOME 온 MANAGE USERS	O Disable two-factor authentication on this server.		
	Enable 2FA for the TSplus gateway and stand-alone application servers		
ស្ដែ settings	O Enable 2FA for TSplus application servers only		
ලිතු license			
	Trial License : 0 days remaining. Click here to activate a new license. P	łelp	

Then, connect to our

Licensing Portal

and enter your Order Number, your e-mail address, Serial Number and select "Two-Factor Authentication" on the dropdown list below:

Licensing Manage	ement App		Support
	In case of any issue, please pr	ess CTRL F5 to refresh your web browser.	
	Get your License		
	Order Number		
	Please type the "Order Number" specified in	the order confirmation email	
	Email	Please type the email address used for your order	
	Serial Number (PXX XXX XXX)	Please type the Serial Number	
	Two-Factor Authentication •	Please type the Software	
	Show license		
	Partners	/ Resellers	

You will get your license.lic file. Then, go to the License

tab and cick on the "Activate your license" button:

🤣 Two-factor Authentication Administ	tration - TSplus	-	\times
۰ 🚫	wo-factor Authentication Administration		
 ↔ HOME ▲ MANAGE USERS ○ CONFIGURE SMS 	তিন্য Activate your License]
袋 SETTINGS G LICENSE	Iccense Status Image: Serial Number: Image: Imag		

Activate License		×
When you did place your order, a license file named 'lice been created for you. Please browse to the location of this license.lic file to ac two-factor authentication.		
		OK
License	\times	
Your permanent license has been successfully activated! Serial Number: P		
OK		

Enable Two-factor Authentication

Perform the following steps to enable two-factor authentication for your TSplus server or deployment. If your TSplus deployment is configured to use multiple servers, perform this task on the TSplus server exposed as the single point of entry for users or having the reverse proxy role.

1. Open the two-factor authentication administration application. The two-factor authentication status and the license status are displayed:

🤗 Two-factor Authentication Admi	nistration - TSplus —		×
$\overline{\mathbf{O}}$	Two-factor Authentication Administration		
М НОМЕ			
	O Disable two-factor authentication on this server.		
	Enable 2FA for the TSplus gateway and stand-alone application servers		
袋 settings	Enable 2FA for TSplus application servers only		
ତିଲ୍ଟ LICENSE			
	Permanent license activated.		
	(?) Не	lp	

By default, 2FA is enabled for the TSplus gateway and stand-alone application servers.

You can enable it for TSplus application servers only, by entering the authentication server URL:

⊘ Two-factor Authentication Adminis	stration - TSplus —	\times
	Two-factor Authentication Administration	×
М номе		
	Authentication Server URL: terminalserviceplus.ddns.net 🧪 Save	
	Enter the URL of the logon Web page without the page name (e.g. https://app.mycompany.com), a network name or an IP address.	
袋 settings	Enable 2FA for TSplus application servers only	
	Permanent license activated.	
	() Нер	
Or disable it:		

🤣 Two-factor Authentication Admi	nistration - TSplus —		Х
$\overline{\mathbf{O}}$	Two-factor Authentication Administration		
М НОМЕ			
	Disable two-factor authentication on this server.		
CONFIGURE SMS	O Enable 2FA for the TSplus gateway and stand-alone application servers		
ស្ត្រី Settings	O Enable 2FA for TSplus application servers only		
	Permanent license activated.		
	🧿 Не	lp	

Add Users and Groups

Once two-factor authentication is enabled, you can configure users for two-factor authentication.

1. From the two-factor authentication administration application, click on the Manage Users tab.

A MANAGE USERS

2) Then, click on Add to select users and/or groups of users. The Select Users or Groups box opens.

🤣 Two-factor Authentication Admi	nistration - TSplus						- 🗆 X
$\overline{\mathbf{O}}$	Two-factor Aut	hentication Adı	ministrat	ion			
Ф номе	+ Add	🥕 Edit	5 Reset		× Remove	Send SMS	
	Domain Name		Activated	Receive	e Code By	Phone Number	
	Users	J9D\laura	No	Арр			
ស្ត្រ settings		J9D\administrators					
				Select Use	rs or Groups		×
				Select this Users or G	object type: iroups		Object Types
				From this lo			
					GOQLLU9D		Locations
				Enter the of Thomas	bject names to select	(examples):	Check Names
				Advanc	ed	C	DK Cancel
3) Add as many	users and c	roups as r	equire	d and	then cli	ck	

óк

. The users and groups are added to the list and enabled for two-factor authentication.

Edit Users

On the same tile, you can edit the way users receive verification codes by selecting a user and clicking on the "Edit" button:

🤣 Two-factor Authentication Adm	inistration - TSplus				- 🗆 X
$\overline{\mathbf{O}}$	Two-factor Authentication	Administratio	n		
	+ Add 🧪 Edit	5 Reset	× Remove	Send SMS	
	Domain Name	Activated	Receive Code By	Phone Number	
	Users	Activated	Receive Code by	Phone Number	
	WIN-PJKGOQLLU9D\laura	No	Арр		
ស្ត្រិ settings	& WIN-PJKGOQLLU9D\thomas	No	Арр		
CT LICENSE	🤣 Edit User		- [×	
	 Use an authentication app t 	o receive verification c	odes (default)		
	Receive verification codes by	SMS			
	Phone Number:				
		e.g. +1415555	2671		
			🧪 Edit User		

The user receives verification codes on the authentication app by default. You can choose that he/she receives it by SMS by selecting the option and adding the user's phone number on the field below.

Remove Users and Groups

In order to remove users or groups, select the user or the group and then click on Remove. A confirmation message is displayed.

😔 Two-factor Authentication Ad	ministration - TSplus					 \times
\bigcirc	Two-factor Authentication Administration					
Ф номе	+ Add	🥕 Edit	5 Reset	× Remove	Send SMS	
-	Domain Name Users		Activated	Receive Code By	Phone Number	_
CONFIGURE SMS		J9D\laura	Yes	SMS	+	
😥 SETTINGS	🌲 WIN-PJKGOQLLU	J9D\thomas	No	Арр	+	
0	Groups					—
	R WIN-PJKGOQLLU	J9D\administrators				
	Removing	two-factor authenticat Do you really want to user or group?		tor authentication for the	×	
				Yes	No	

Click

Yes

. The user or the group is removed from its list and won't connect using two-factor authentication anymore.

Reset Configuration for Users

In the event of the loss of the authenticating device for a user, or if the user needs to display the secret QR code again, you must reset the user authentication settings.

1.

From the two-factor authentication administration application, click on the Manage Users tab.

2.

Select one or multiple activated users and then click on Reset. A confirmation message is displayed:

🤣 Two-factor Authentication Adm	ninistration - TSplus					– 🗆 X
\bigcirc	Two-factor Aut	hentication Adr	ministratio	n		
М НОМЕ	+ Add	🥕 Edit	S Reset	× Remov	ve 🔛 Send SMS	
	Domain Name		Activated	Receive Code By	Phone Number	
	Users	10D) Invert				
袋 settings			Yes	SMS App	+	
ତଳ LICENSE	Groups	J9D\administrators				
	Resetting	configuration for user(s) Do you really want to r The selected user(s) wi upon their next logon.	reset the configu ill have to config	uration of the selected u jure their authentication Yes	xuser(s)? n device	

3) Click Yes

. The selected users will be presented a new QR code at the next login and will have to scan it in their device's authentication app. You can also modifive the user's phone number, so that he can receive a verification code on his new device.

Enroll User for Two-factor Authentication

Once a user has been enabled for using two-factor authentication, an activation message will be displayed at his next successful logon from the TSplus Web portal.

Protect verifica	your account with 2-step tion
Display the	verification code using an authentication app
	the authenticator app on your mobile phone. the QR code displayed below:
1. Type y	your verification code via SMS
phone	numbers format (e.g. +14155552671):
	Send SMS button to register your phone number and e your verification code.
	Receive SMS
Validate yo	ur verification code
	Validate

In order to complete the required steps, you have two choices: either generate codes via an authenticator app, either make the user receive codes by SMS.

Receive codes with an Authenticator Application

The user must install an authenticator app on a portable device, such as his smartphone.

You can use one of the following authenticator apps to proceed. These apps are available across a wide range of platforms:

- <u>Authy</u>
- Google Authenticator
- Microsoft Authenticator

Please use each app documentation for more details on how to proceed to add your TSplus account.

Configure SMS

In order for the user to receive verification codes by SMS, you must first enable it. Click on the Configure SMS tab:



CONFIGURE SMS

TSplus leverages Twilio in order to send verification codes by SMS. Twilio is a third-party cloud platform, not affiliated with TSplus.

1. Just create a free account on <u>Twilio</u> by clicking on the button below "Start your free trial with Twilio":

🤣 Two-factor Authentication Adm	ninistration - TSplus — 🗆	×
$\overline{\mathbf{O}}$	Two-factor Authentication Administration	
命 Home 온 Manage Users	TSplus leverages Twilio in order to send verification codes by SMS. Twilio is a third party cloud platform not affiliated with TSplus.	1
	Click here to create your Twilio free trial account. Trial accounts are granted a preloaded balance.	
ស៊្លា settings	Once you finish signup, your Account SID, Auth Token and trial Number are displayed on your Twilio dashboard.	
©₽ UCENSE	SMS is disabled. Click here to allow users to receive their verification code via SMS. Account SID: Auth Token: Phone Number: Save	

2) On your

Twilio account dashboard

, you will need to activate your Trial Number:

⊕ tw	rilio		
TRIAL	~		
ŵ	Dashboard	Account Dashboard	
$\overline{\hfill}$	Billing Usage Settings Upgrade	Project Info TRIAL BALANCE \$15.50 Get a Trial Number ACCOUNT SID	
		A	ū
		AUTH TOKEN Show	Ō

3. The next step is only necessary for Trial versions. It allows Twilio to verify the actual phone number on which SMS will be sent. Enter this number under the <u>"Phone Numbers" menu -</u> <u>"Verified Caller IDs"</u> tab :

Verified Caller IDs	
Number	Friendly Na
NUMBER	FRIENDLY NAME
+33 6	Thomas 🥒

4) You will then be able to enter your account SID, Authentication Token and

Trial Number

as the Phone Number on the Configure SMS tab of TSplus:

Account Dashboard

Project Info		
TRIAL BALANCE \$13.348	TRIAL NUMBER	
	• Need more numbers?	
ACCOUNT SID		G
AUTH TOKEN Hide b		ū

🤣 Two-factor Authentication Admin	istration - TSplus — 🗆	×
$\overline{\mathbf{O}}$	Two-factor Authentication Administration	
HOME MANAGE USERS	TSplus leverages Twilio in order to send verification codes by SMS. Twilio is a third party cloud platform not affiliated with TSplus. Configure SMS	
	SMS is enabled. Click here to force users to receive their verification code via an authentication app.	
袋 settings	Account SID:	
ତିଲ୍ଟ LICENSE	Auth Token: b Phone Number: +33	
	Manage Twilio Subscription	
	Service Status ? Support Center	

Then, click on Save. The following message will be displayed:

Configure	SMS	×
1	SMS configuration was saved succes	sfully.
		ЭК

You can manage your Twilio subscription on the Manage Twilio subscription section, at the bottom of the Configure SMS tab. Administrate your account, see the Service Status or reach Twilio Support Center just by clicking on the corresponding buttons.

Login using Two-factor Authentication

Once a user has configured his TSplus account in his authenticator app, he or she will be able to connect using its password and the code provided by its authenticator app or by SMS.

	TSPLUS	
Lo	og on	
	TSPLUS	
ſ	John	
	184650	11.11
<u>R</u> II III	• HTML5 • RemoteApp	10 ····
	Log on	- In the

Time Synchronization

TSplus server and Devices must be on time. This means that the time and date of the server must be synchronized with a time server. Devices must also have time synchronization, regardless of the time zone on which they are configured.

If an authentication request comes from a Device whose date and time are not synchronized, or if the server's date and time are not synchronized, this request may be rejected.

The validation of information between the Device and the server relates to UTC time. In the **Settings** section, the Discrepency parameter is used to manage the period of validity of the code, in intervals of 30 seconds.

Example of validation or valid authentication:

- the server is synchronized with a time server, the time zone is UTC + 2, it is 2:30 pm
- the Device is synchronized with a time server, the time zone is UTC + 1, it is 1:30 pm
- the Discrepency parameter is configured at 60, i.e. a code validity period of 30 minutes
- referred to UTC time, the Device time and the server time are identical.

Example of validation or invalid authentication:

- the server is synchronized with a time server, the time zone is UTC + 2, it is 2:30 pm
- the Device is not synchronized with a time server, the time zone is UTC-1, the time is manually set to 1:30 pm
- the Discrepency parameter is configured at 60, i.e. a code validity period of 30 minutes
- the server time referred to UTC time is 12:30 am
- the time communicated by the Device, referred to UTC time is 2:30 pm
- the difference is 120 minutes, the validation code is therefore refused.

Settings

ស្រ្លិ SETTINGS

The Settings tab allows you to

whitelist users, in order for them to connect using an RDP client, without the need to enter a two-authentication code.

Click on the "Add" button to add a user and remove a user by selecting it and clicking on the "Remove" button.

🤣 Two-factor Authentication Ad	Iministration - TSplus			-	×
$\overline{\mathbf{O}}$	Two-factor Authenti	cation Administration	n		
Ф номе	+ Add	× Remove			
	Whitelisted users below are able to a	connect using an RDP client, without	the need to enter a two-factor authentication code.		
	😫 WIN-A1L00CN0E56\john	SWIN-A1LOOCNO	E56\Jaura		
ស្ដែ settings					
Users					
Advanced					
L					

The Advanced tab allows you to configure Two-Factor Authentication in-depth settings.

Image: Substant S	×
Image: Section Code Message Value Value Discrepancy 480 Discrepancy 480 Issuer WIN-A1LOCONDE56 - TSplus Validity Atter First Session 3600 Digits 6 SMS Verification Code Message Your %ISSUER% verification c	
Users	
Advanced	

Discrepancy

You can modify the Discrepancy value, which allows you to set the validation time of a verification code. A discrepancy of 3 means that the same verification code remains valid 90 seconds backward and forward its original 30 seconds validity period. Default is 480, which means 480 x 30 seconds= 4 hours.

Roduct	Name	Value
	Discrepancy	480
	🤣 TSplus - Edit Setting	× OQLLU9D - TSplus
	Discrepancy	
	Description: The allowed discrepancy (in both directions) when validating verification code. A discrepancy of 3 means that the same verification code remains valid 90 seconds backward and forward its original 30 seconds validity period. Default is 480	
	Value: [480]	~
	Save	cel

A string indicating the name of the two-factor authentication service. The issuer is displayed on the client mobile app and identifies the service associated with the generated verification code. By default, it is composed of the server's name with TSplus.

Noduct	Name	Value		
	Discrepancy	480		
	Issuer	WIN-PJK	GOQLLU9D - TSplus	
	🤣 TSplus - Edit Setting	×		
	Issuer			
	Description:		UER% verification c	
	A string indicating the name of the two-factor authenticatio service. The issuer is displayed on the client mobile app and identifies the service associated with the generated verificati code.			
	Value: WIN-PJKGOQLLU9D - TSplus			
	WINY INCODECUDE TOpics			
	Save Canc	el		
			-	

Validity After First Session

Period during which a user can open a session without having to revalidate a previous two-factor authentication code. This setting allows users to open applications from the Web application portal successively. Default is 480 minutes.

Noduct	Name	Value		
	Discrepancy	480		
	Issuer	WIN-PJK	GOQLLU9D - TSplus	
	Validity After First Session	480		
	🤣 TSplus - Edit Setting	×		
	Validity After First Session		SUER% verification c	
	Description:			
	Period during which a user can open a session without havin to revalidate a previous two-factor authentication code. This setting allows users to open applications from the Web application portal successively. Default is 480 minutes.	g ^		
	Value:			
	480			
	Save	1		

Validity Before First Session

Period during which a user can open a session after validating a two-factor authentication code from the Web portal or from the mobile app, in secondes. Default is 3600 seconds.

Norduct	Name	Value		
	Discrepancy	480		
	Issuer	WIN-PJKG	50QLLU9D - TSplus	
	Validity After First Session	480		
	Validity Before First Session	3600		
	🤣 TSplus - Edit Setting	×	UER% verification c	
	Validity Before First Session			
	Description:			
	Period during which a user can open a session after validatir two-factor authentication code from the Web portal or from mobile app, in secondes. Default is 3600 seconds. Value:			
	Save	el		

The number of digits to display to the user. Please note that this setting may not be supported by authentication apps. This number must be greater than or equal to 4 and lower or equal to 12. Default is 6.

Norduct	Name	Value		
	Discrepancy	480		
	Issuer	WIN-PJK	GOQLLU9D - TSplus	
	Validity After First Session	480		
	Validity Before First Session	3600	_	
	Digits	6		
	⊘ TSplus - Edit Setting	×	SUER% verification c	
	Digits			
	Description:			
	The number of digits to display to the user. Please note that t setting may not be supported by authentication apps. This number must be greater than or equal to 4 and lower or equa to 12. Default is 6.			
	Value:			
	Save	1]	

SMS Verification Code Message

Message sent to users requesting a verification code if they are configured to receive it via SMS. This message must contain the %CODE% placeholder which will be replaced by the actual verification code. Default is: Your %ISSUER% verification code is: %CODE%

Noduct	Name	Value	
	Discrepancy	480	
	lssuer	WIN-PJKGOQLLU9D - TSplus	
	Validity After First Session	480	
	Validity Before First Session	3600	
	Digits	6	
	SMS Verification Code Message	Your %ISSUER% verification c	
	⊘ TSplus - Edit Setting	×	
	SMS Verification Code Message		
	Description:		
	Message sent to users requesting a verification code if they a configured to receive it via SMS. This message must contain th %CODE% placeholder which will be replaced by the actual verification code. Default is: Your %ISSUER% verification code %CODE%	he	
	Value: Your %ISSUER% verification code is: %CODE%		
	Save Cance	el	

Advanced printing option: Universal Printer

The TSplus Universal Printer allows you to print documents from any PC or mobile device. See the <u>video tutorial</u> to print with the Universal Printer.

Universal Printer Manager

- 1 8 1	Splus - Administration Console		-	×
	TSPLUS	Remote Access Management Console		
ŵ	НОМЕ			
	APPLICATIONS	The Universal Printer - Ghostscript PDF - is installed		
8	PRINTER	The Universal Printer is Ready		
S	WEB	The Universal Printer is set as Default printer		
₽	FARM	Universal Printer Manager		
گ	SESSIONS	Install Universal Printer (CUSTPDF) Install Universal Printer (Ghostscript)		
ez,	SYSTEM TOOLS			
鐐	ADVANCED	Remove the Universal Printer Set it as Default Printer		
చి	ADD-ONS	View Printer Universal Printer properties		
©7	LICENSE			
		Paper size		
		PostScript Custom Page Size V Reset User Settings on logon		
		Portrait ~		

Since the release of TSplus version 12, the Universal Printer Manager has its own tab:

The Universal Printer Manager gathers all the required tools to install, uninstall, display and handle the Universal Printer options. This tool enables administrators to help users with dynamic printing requirements.

Information can be found at the top concerning the current universal printer status: You can check if the newest version, which uses GhostScript, is installed. You can see if the printer is ready. And you can verify that the printer is set to default.

The Buttons below allow you to:

- Install the Universal Printer (which uses CUSTPDF), which is the old printer, before TSplus version 9.
- Install the New Universal Printer (which uses Ghostscript), which is more stable with more printing format support.
- Remove the Universal Printer.
- Set it as default printer.
- View Printer: Opens a window where you can see the status of your printing documents, pause, resume or cancel the print job.. You can also set your printing preferences and properties.
- Universal Printer Properties: Opens this window, where you can see all the printing properties. After the General Tab, there are tabs for sharing, ports, advanced, color management, security and device settings.

🖶 Unive	rsal Print	ter Prope	erties					×
General	Sharing	Ports	Advanced	Color N	lanagement	Security	Device	Settings
50		Univers	al Printer					
<u>L</u> ocatio	on:							
<u>C</u> omm	ent:							
M <u>o</u> del:	Ĺ	CUSTPD	F Writer					
- Featu		COSIFD	i wheel					
	or: Yes			Pa	per availabl	e:		
Dou	ble-sideo	l: No		L	etter			~
Stap	le: No							
Spee	ed: 400 p	pm						
Max	imum re	solution	: 4000 dpi					\sim
			Pr	<u>e</u> ferenc	es	Print	<u>T</u> est Pag	ge
					ОК	Cancel		<u>A</u> pply

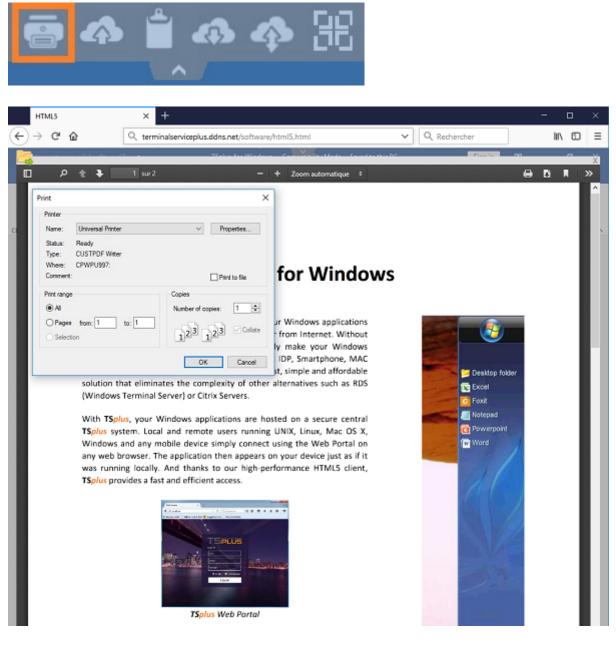
• Below, you can set the Paper size for printing from A4 to any kind of printing format. (See <u>Customize page format printing</u> for the PostScript Custom Page Size). • You can also choose between 2 printing formats: Portrait and Landscape.

Pa	per size		
	A4	\sim	Reset User Settings on logon

The "**Reset User Settings on Logon**" **box** allows to force the default format of the Universal Printer to the one selected in the AdminTool into each user's new session . If this box is not ticked, during its first session, the user will have the format selected by the AdminTool as default format, but if he chooses another default format, then it is the one which will be kept for its next session.

###Printing with the Universal Printer

When selecting this printer, the document to print is automatically converted into a PDF file:



This PDF file is automatically pushed to the local PDF Reader of the user's workstation. Each

print job is opened as soon as it is ready on the user's local disk, without waiting for the previous Acrobat preview to be closed. The printing process starts only once the PDF is fully created on the client' side, which guarantees the print job starting without delay.

	Print	1	>
General			
- Select Printe Microso Junivers	oft XPS Document Writer#:1		
<			>
Status: Location: Comment:	Ready	Print to file	Preferences Find Printer
Page Range		Number of copies	1 ÷
		Print Cance	

You can choose from 3 printing options on the Local Resources tab of the <u>Portable Client</u> <u>generator</u>:

		Client Genera							
General	Display	Remote Desktop client	Seamless client	Local resources	Program	Security	Load-Balancing		
Local d	evices -								
١	🗹 Disks 🗹 Printe								
	Sour	d							
	🗹 СОМ	ports							
	🗹 Smar	t cards							
	✓ USB	devices							
	Play rem	ote sound:	Local	y OF	Remotely	0	No		
Univers	al printer (option							
-	Action:			Printer scaling					
	-	view with the local PDF R		O Use origin					
	O Print	t on default printer - local (○ Fit pages	-				
	-	Select the local printer - local driver included Shrink pages to printable area (if necessary)							
	Sele	ect the local printer - local	anverinciuded	Sinnik pa	ges to print	able area (ir necessary)		
	Sele	ect the local printer - local	anver included		ges to print	able area (ii necessary)		
Client loca	_	ct the local printer - local		Browse	ges to phrit	able area (i necessary)		

- Local PDF Reader preview: the document will be pushed and the local Acrobat Reader will open with the generated PDF file. The user can print it, or save a copy on his local disk drive.
- **Print on the user's default printer:** the document will be automatically pushed to the default user's printer (the local printing driver is included into the TSplus connection client). Key value : This option is to be used for people who have a lot of printing to do per day and use the same printer for this purpose.
- Select a local printer: The user can select one of his local printer (the local printing driver is included into the TSplus connection client).

If you do not have a PDF Reader installed on your machine, we recommend the use of Foxit Reader.

• If you wish to **print on the default local printer with the system defined PDF reader** instead of Sumatra, you can turn the setting "defaultsystem" on, on the generated client parameters, as explained on <u>this documentation</u>.

###Customize page format printing

If you want to have a specific page format and your printer is not compatible with printer redirection, you can set the Universal Printer page format by opening the Devices and Printers menu of the Control Panel. Right click on the Universal Printer, then on Printer Properties::

Pis Devices and Printers -	o x
← → × ↑ 🛱 > Control Panel > Hardware and Sound > Devices and Printers v 🖉 Search Devices and Pr	inters P
Add a device Add a printer See what's printing Print server properties Remove device	- 0
Freebox Server	^
Fax Foxit Reader PDF Microsoft Print Microsoft XPS Printer to DDF Document Writer	
V Unspecified (3) Printing preferences	
Printer properties Create shortcut	
Intel(R) 82574L SAS Controller USB Root Hub (USB 3.0) Connection	
Universal Printer State: Operating Status: 0 document(s) in queue Model: CUSTPDF Writer Category: Printer	
🖶 Universal Printer Properties	×
General Sharing Ports Advanced Color Management Security Device Settin	igs
So Universal Printer	
Location:	
<u>C</u> omment:	
Model: CUSTPDF Writer	
Features	
Color: Yes Paper available:	
Double-sided: No	
Staple: No	
Speed: 400 ppm	
Maximum resolution: 4000 dpi	
Pr <u>e</u> ferences Print <u>T</u> est Page	
OK Cancel Appl	Ý

Click on Preferences, then on Advanced:

🖶 Universal Printer Printing Preferences	Х
Layout Paper/Quality	
Orientation: Page Format Pages per Sheet 1 ✓	
Ad <u>v</u> anced.	
OK Cancel App	bly

Go to Ghostscript PDF Advanced Document Settings / Paper Output / Paper size / PostScript Custom Page. Finally, click on Edit Customized Page Size and enter your preferred settings. This is especially helpful with receipt and label printers.

Horiversal Printer Printing Preferences

Orie	CUSTPDF Writer Advanced Options
	PostScript Custom Page Size Definition ? X
	Custom Page Size Dimensions Unit Width: 210.06 (25.40, 5080.00) Height: 297.00 (25.40, 5080.00)
	Paper Feed Direction: Long Edge First Paper Type: O Cut Sheet
	Offsets Relative to Paper Feed Direction
	Perpendicular Direction: 0.00 (0.00, 5080.00) Parallel Direction: 0.00 (0.00, 5080.00)
	OK Cancel Restore Defaults
	OK Cancel

Sumatra default page scaling setting (noscale/shrink/fit) can now be set in Client Generator and remoteapp2.js file for remoteApp connection from Web Portal

You can specify from the Client generator which page scaling you want to be selected by default (None/Fit/Shrink), when printing using the universal printer. The default value of this setting is "Use original page sizes".

You can also change this setting for remoteApp connection using the web portal, by changing the value of the variable remoteapp2_pagescaling in "remoteapp2.js" file located in "C:\Program Files (x86)\TSplus\Clients\www\software".

'noscale' value is for "Use original page sizes" · 'shrink' value is for "Shrink pages to printable area (if necessary)" · 'fit' value is for "Fit pages to printable area"

var remoteapp2_pagescaling = 'noscale';

 \times

Wine	dows	Client Genera	tor				_
General	Display	Remote Desktop client	Seamless client	Local resources	Program	Security	Load-Balancing
-Local d	evices						
١	Disks Printe Soun COM Smar USB	nd I ports					
	Play rem	ote sound:	Locally	y OF	lemotely	0	No
Univers	al printer (option					
And in case of the local division of the loc	Action:			Printer scaling	1:		
	O Pres	view with the local PDF Re	aader		-	A 0	
-	<u> </u>	view with the local PDF Re t on default printer - local o		O Use origin	al page siz		
-		view with the local PDF Re t on default printer - local o ect the local printer - local o	driver included		al page siz to printable	area	if necessary)

Note: If you are using these settings, please make sure that you are using, on your workstation, Connection Client version >= 14.30.0.71.

Updating Terminal Service Plus

Our development team is working on a daily-basis to ensure the stability and compatibility of TSplus with the latest versions of Microsoft Operating Systems and the latest Updates. We are proud to provide you with new features and enhancements every week.

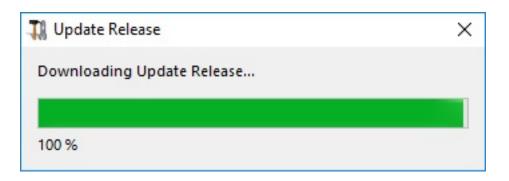
This is why it is recommended to keep your server up to date. By subscribing to our annual Support and Updates Services, you will have access to the latest Updates and bug fixes.

In order to see which TSplus version you have and update it:

• You can check the status of your TSplus release on the Home tab of your AdminTool:

🐺 TSplus - Administration Console	– 🗆 X	
TSPLUS	Remote Access Management Console	
М номе		
	Computer name: WIN-A1L00CN0E56 http://localhost Private IP 192,168,133,131	
🕲 web	Public IP 78. Public IP 78. The built-in HTTP server is listening on port 80	
FARM	Connections: 1 The HTTPS server is listening on port 443	
	Q Session Manager	
SYSTEM TOOLS	System Audit - No issues found on 6/15/2020 1:43:28 PM	
🔯 ADVANCED	× Version 12.70.6.2 - Version 14.10.6.14 (i) Read changelog	
Հ굿 ADD-ONS	License Activated - Enterprise edition - Unlimited users	
©₽ LICENSE	Control of support date:	
	English •	

• You can then click on it. Since TSplus 11.50 version, the AdminTool automatically downloads...:



...and applies the Update Release program when requested:

Update Release	×
The download of UpdateRelease.exe program has been completed. It has been saved in: C:\Users\admin\Downloads	
Would you like to apply it now?	
<u>Y</u> es <u>N</u> o	

You still can download it via this link: <u>Update Release</u> and apply it manually.

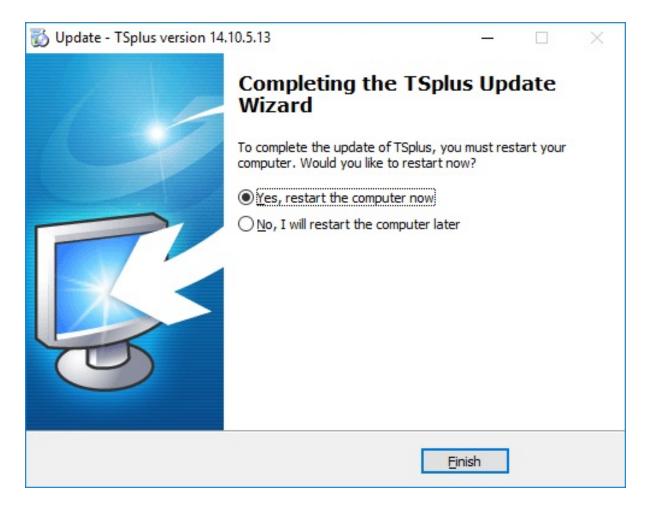
The Update Release program is designed to keep your current TSplus settings safe. It is not required to reboot after Update; however we do recommend to do so.

If you have not subscribed yet for TSplus Update/Support services, or if your subscription has expired, you will not be able to run the Update Release program:

Update License		
Did you get the right to run this Update program?		
We are investing every day to enhance and to upd	lating the software.	1
The right to install and to use any new release is gr Each Update is requiring the subscription of our an	nual Update/Support servi	
If not yet done, you can subscribe it, or renew it no	w.	
	OI do not agree	
I agree with the above terms and conditions		

In such case, we advise you to place your order on our Store Page. You will receive back the proper information to download your support.lic file. Activating your Update/Support services is an easy process described <u>here</u>.

When the update is finished, a reboot is required:



Just for specific requirements, the TSplus Support team can deliver an Emergency Update code which will unlock the Update Release program.

TSplus Update Release program 12.60		- 🗆 X
Welcome to TSplus Update Release program	m 12.60 T	
The Support/Update service is not subscribed Please subscribe it now or contact us for more i In case of emergency, our support team can cre	nformation.	
Emergency Update Code:		
TSplus: click Next to continue.	Next >	Exit >

• Since TSplus 11.40 version, you will have the choice to install <u>TSplus Advanced Security</u>, our powerful Security Add-On, in its Ultimate trial version (All Security features free to use for 2 weeks) to your TSplus system:

🖏 Setup - TSplus	_		×
Ready to Install Setup is now ready to begin installing TSplus on your computer.		Q	<u>s</u>
Click Install to continue with the installation.			
< <u>B</u> ack <u>I</u> n	stall	Can	cel

Upgrading your TSplus version

If you wish to upgrade your current version of TSplus, in order to add more users or more features, click on the "Upgrade Existing License" tab of our Store page:

Upgrade Edition or Add L	Jsers to your TSplus license
TSplus License 💮 Add-ons 🔇	Support & Updates Upgrade existing License
What is your current TSplus license:	
- 🄑 Your existing TSplus license	
Edition	Number of Users
Mobile Web *	3 *
- Edition	Number of Users
- 🄑 Your upgraded TSplus license	\$165
Enterprise •	5
Your TSplus Upgrade License Code:	
- 🎧 Your details	Buy now
Enter your Upgrade License Code: (*)	Enter your Email to receive your new license file:
Upgrading a TSplus server requires an Upgrade License Code which you can get from winload now and run this Upgrade License Code generation program on your existing will display your Upgrade License Code. you have any question for TSplus Sales team, regarding release information, licensing	TSplus server.
ease send an email to sales@terminalserviceplus.com	or any ourse surve inquintus.

Download the Upgrade License Code generation program, in order to get your Upgrade License Code.

How to use Apache rather than Terminal Service Plus default Web server

Pre-requisites

It can be a good idea to <u>Update Terminal Service Plus</u> to be sure that you get the latest TSplus programs.

1. Start AdminTool and go to the Web Server Tab

Click On the Manage Web Servers tile, check **Use a different HTTP web server** because you want to use Apache.

11 1	Splus - Administration Console	-		×
		Remote Access Management Console		
命 □	HOME	Default HTTP web server A built-in HTTP Web Server is provided with TSplus However, you can use a different one (IIS or Apache for example). O Use the built-in HTTP web server		
Ø	PRINTER	• Use a different HTTP web server When using IIS or Apache, its HTTP port number must be set to 81. (Tunneling forwards this 81 port into the public HTTP port 80)		
O	WEB			
	Web Portal	Change the Web Server root path		
	нттру	You can change the Web Server default root path. The current Web Server root path is:	_	
	Web Server	C:\Program Files (x86)\TSplus\Clients\www Select a new Web Server root path		
₽	FARM			
å	SESSIONS	Web servers options Change the HTTP/HTTPS port numbers		
ą	SYSTEM TOOLS	Will not change its or Apacte port settings HTTP: 80		
鐐	ADVANCED	HTTPS: 443		
ස	ADD-ONS			1
		Save and Restart Web Server		
Съ	LICENSE			

Then, use the button **Select a new Web Server root path** to tell TSplus where will be the new web folder root. TSplus will copy the requested files/folders into this new root folder and, at this point, the TSplus setting for Apache is near completion. A pop-up will recommend you to change

Apache HTTP port to 81:



It's now time to set up Apache.

2. Setting up Apache

Change the HTTP from 80 to 81.

The specific way of doing this depends on your Apache version and your current Apache settings.

We advise you to backup any Apache settings file before modifying them, so you will have a way to restore them if needed.

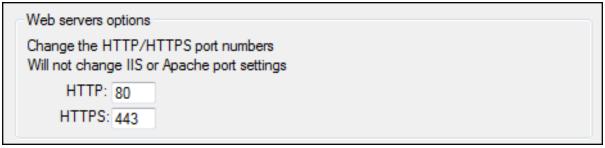
Usually you can change Apache listening port by editing the file httpd.conf found in "Apache\conf" directory:

Listen 81

Once it is done, restart the Apache service.

3. Going back to TSplus Web Servers Management tool

You can set the HTTP and HTTPS ports in TSplus Web Management tool. We recommend using standard ports, but this feature can be handy when trying to avoid a conflict with an other process.



4. Last steps

For the Universal Printer, we need to be able to write in the PRINTS folder.

So, verify that Everyone/Users... have full rights on .../prints folder.

Organize 🔻 📜 Open Inclu	de in library 🔻 Share with 🔻 New folder				= -	2
숨 Favorites	Name	Date modified	Туре	Size		
🧮 Desktop	📔 Backupparam	6/24/2015 4:05 PM	File folder			
🐌 Downloads	Doot Boot	4/20/2015 12:45 PM	File folder			
📃 Recent Places	Documents and Settings	7/14/2009 6:53 AM	File folder			
	MSOCache	1/29/2015 3:01 PM	File folder			
a Libraries	🐌 PerfLogs	7/14/2009 4:37 AM	File folder			
Documents	\mu prints	1/30/2015 11:50 AM	File folder			
J Music	🌗 Program Files	9/10/2015 5:03 PM	File folder			
Pictures	🌗 ProgramData	9/10/2015 5:03 PM	File folder			
🛃 Videos	🚵 Recovery	2/24/2011 7:00 PM	File folder			
	🌗 Shared Folder	6/5/2015 5:28 PM	File folder			
툊 Computer	🌗 software	7/10/2015 4:03 PM	File folder			
🐔 Local Disk (C:)	🐌 templates	7/10/2015 3:55 PM	File folder			
	퉬 tmp	9/10/2015 5:03 PM	File folder			
🙀 Network	퉬 tmpsetup	6/23/2015 5:12 PM	File folder			
	퉬 Users	6/12/2015 3:11 PM	File folder			
	퉬 var	1/30/2015 11:50 AM	File folder			
	🌗 Windows	6/25/2015 11:54 AM	File folder			
	iii wsession	9/10/2015 5:03 PM	File folder			
	🚳 grldr	2/24/2011 7:02 PM	System file	200 KB		
	index html	7/10/2015 4·03 PM	Firefox HTML Doc	14 KR		

🗼 prints Properties 📃 💌
General Sharing Security Previous Versions Customize
Object name: C:\prints
Group or user names:
& Système
Administrators (admin-PC\Administrators)
Section 2014 Secti
Remote Deckton Hears (admin_PC\Remote Deckton Hears)
To change permissions, click Edit. Edit
Permissions for Users Allow Deny
Full control 🗸 🔺
Modify 🗸
Read & execute 🗸 🗉
List folder contents 🗸
Read 🗸
Write 🗸 🔻
For special permissions or advanced settings, Advanced
Learn about access control and permissions
OK Cancel Apply

Then select the .html file you wish to use as a Web Access page in:

C:\Program Files (x86)\TSplus\Clients\www

and copy it as index.html in your web root folder, typically this is the "Apache\htdocs" directory.

5. Specific Settings for TSplus Gateway Portal, Load Balancing and/or HTML5 file transfer

If you want to use this Apache based system as a TSplus Gateway Portal and/or use TSplus Gateway Portal Load Balancing feature and/or use HTML5 file transfer feature, you will need to allow the execution of TSplus GCI scripts by Apache.

First, you must have the CGI module enabled in Apache.

Edit the file httpd.conf found in "Apache\conf" directory, and search for a line looking like:

;LoadModule cgi_module modules/mod_cgi.so

Remove the ";" to enable the CGI module:

LoadModule cgi_module modules/mod_cgi.so

Then, find a line starting by:

AddHandler cgi-script

And add the .exe extension to authorize .exe files to be handled as CGI programs by Apache:

AddHandler cgi-script .exe

Finally, you must tell Apache that the TSplus "cgi-bin" folder contains CGI programs. To do so, you must add the following line in the file httpd.conf found in "Apache\conf" directory:

ScriptAlias /cgi-bin/ "C:/Program Files (x86)/TSplus/Clients/www/cgi-bin/"

Once it is done, restart the Apache service.

If you face any issue setting up CGI on your Apache server, please refer to the <u>Official</u> <u>Apache documentation</u>

Checking your settings: To validate your settings, please open a web browser on your server and go to <u>http://localhost/cgi-bin/hb.exe</u>. If you get an Apache error page, you have an issue in your Apache configuration. If you get a line of text/numbers, everything is fine!

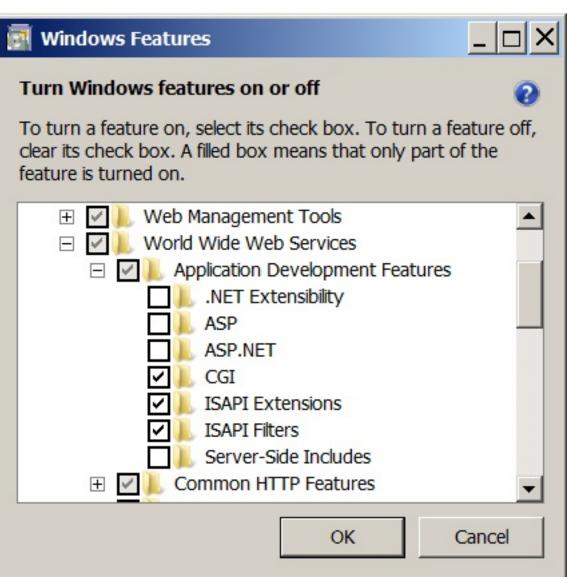
How to use IIS rather than Terminal Service Plus default Web servers

Pre-requisites

It can be a good idea to <u>Update Terminal Service Plus</u> to be sure that you get the latest TSplus programs.

1. IIS configuration

• Install IIS with the following modules : CGI, ISAPI Extensions and ISAPI Filters.



- Configuring the IIS Port:

Access the IIS management console, expand the list below your server name, then Expand the "Sites" menu and right click on "Default Web Site" and click on "Edit Bindings":

8	1	ntern	et Informa	tion Services ((IIS) Manager		
WIN-URFCT	RSQGDF + Sites + Default we	bsite	•				
File View Help							
Connections) Defau	ult website	Home		
Start Page	-URFCTRSQGDF\Administrator)	Filt		• 7	Go 🕞 🙀 Show Al	Group by:	Ŧ
→ Pplication Pools Gites → Office Default website		AS			404	0	
<u>لم</u>	Explore Edit Permissions		.NET Ithorizati	.NET Compilation	.NET Error Pages	.NET Globalization	
P 2	Add Application Add Virtual Directory		JET Profile	.NET Roles	.NET Trust	.NET Users	=
	Edit Bindings			-	Levels		
	Manage Website	•	1	ab	8		
() ×	Refresh Remove		pplication Settings	Connection Strings	Machine Key	Pages and Controls	
2	Install Application From Gallery		1	\$			
	Rename		Providers	Session State	SMTP E-mail		

Click on "http" and "Edit". Change the port to 81 and click Ok, and then click Close:

			Site	Bindings		?
Туре	Host Name	Port	IP Address	Binding Informa		Add
http		80	*		? X	Edit
			t Site Binding			Remove
ype:	IP add	ress: nassigned		Port:		Browse
						Close
				ОК	Cancel	~

Disable the 443 port or change this port for another free port.

Then, restart the IIS Manager.

2. Create virtual directory for CGI

In the left panel menu, expand the menu under your server, then "Sites," and right-click on your site to add a new "virtual directory", as shown in the image below:

Connections	
🔍 - 🔚 🖄 🥵	
 ✓ Start Page ✓ WIN-URFCTRSQGDF (WIN ✓ Application Pools ✓ ✓ Sites 	-URFCTRSQGDF\Administrator)
Default websit	Explore
	Edit Permissions
1	Add Application
2	Add Virtual Directory
	Edit Bindings
	Manage Website
49	Refresh
×	Remove
1	Install Application From Gallery
	Rename
	Switch to Content View

On the window that will open fill in as follows:

Alias: cgi-bin

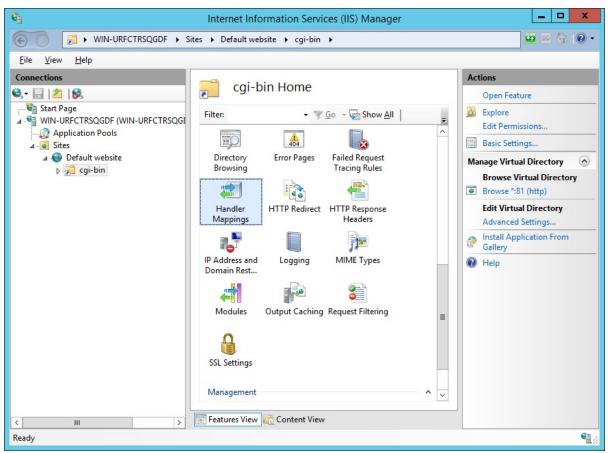
Physical path: "C:\Program Files(x86)\TSplus\Clients\www\cgi-bin"

	Add Virtu	al Directory	? X
Site name: Path:	Default website /		
<u>A</u> lias:			
cgi-bin			
Example: ima <u>Physical path</u> C:\Program F	3.00	\www\cgi-bin	
	authentication]	
		ОК	Cancel

Then click "OK" and you will see that the "cgi-bin" virtual directory has been added to your IIS Web site. Now, right-click this "cgi-bin" virtual directory and click on "Convert to Application". Click "OK" and accept the default settings.

Connections		-9	-
🔍 - 🔚 🖄 🥵	cg دو		
 Start Page WIN-URFCTRSQGDF (Application Pools Sites 	Filter:		
 △ · ● Default website ▷ □ cgi-bin ○ ○	Explore Edit Permissions Convert to Appli Add Application Add Virtual Direct Manage Virtual D Refresh Remove	cation :tory Directory	
	Add Applicatio	n	? X
Site name: Default website Path: /			
<u>A</u> lias:	App <u>l</u> ication pool: Default website		
cgi-bin Example: sales <u>P</u> hysical path: C:\Program Files (x86)\TSplus\C Pass-through authentication	Clients\www\cgi-bin		S <u>e</u> lect
<u>C</u> onnect as Test Settin	ngs		
Enable Preload			
		ОК	Cancel

Then select the "Handler Mappings" icon for this folder on the right side of the Manager window:



From the list of Handler Mappings, double click on "CGI-exe". Then, search the hb.exe executable from the Executable property box and click OK.

	Add Module	Mapping		?	X
Request path:					
*.exe					
Example: *.bas, wsvc.axd					
Module:					
CgiModule				~	
Executable (optional):					
"C:\Program Files (x86)\T	Splus\Clients\wv	ww\cgi-bin\hb	.exe"		
Name:					_
CGI					
Request Restrictions					
		ОК		Cancel	

A prompt for confirmation appears. Click "OK" to allow this ISAPI extension.

	Add Module Mapping	X
0	Do you want to allow this ISAPI extension? Click "Yes" to add the extension with an "Allowed" entry to the ISAPI and CGI Restrictions list or to update an existing extension entry to "Allowed" in the ISAPI and CGI Restrictions list.	
	Yes No Cancel	

Now click on "Edit Feature Permissions":

Name 🔺		Path	State	Path Type	Handler	Entry Type
Disabled						
CGI-exe ISAPI-dl Enabled		Add Managed Handler Add Script Map	Disabled Disabled	File File	CgiModule IsapiModule	Local Local
OPTIONSVerbHand IRACEVerbHandler StaticFile		Add Wildcard Script Map Add Module Mapping Edit Rename	Enabled Enabled Enabled	Unspecified Unspecified File or Folder	ProtocolSupportModule ProtocolSupportModule StaticFileModule,DefaultDocume	Local Local Local
	×	Remove Edit Feature Permissions				
	•	Revert To Parent View Ordered List Help Online Help	_			

Check the "Execute" checkbox and click OK:

Edit Feature Permissions	? ×
Permissions:	
Script	
Execute	
ОК	Cancel

Back to the "CGI-bin" Home, click on "CGI" to open the CGI properties:

ilter:		• 🚏 Go - 🙀	Show All	Group by: Ar	rea	-					
IIS											
	CGI	- A	0		404	*			1	a	
uthentic	CGI	Compression	Default Document	Directory Browsing	Error Pages	Handler Mappings	HTTP Respon	Logging	MIME Types	Modules	
	8	9									

Change the value of "Use New Console For Each Invocation" to "True". Then, click "Apply" to save the changes.

	Actions
	RV Apply
	🖳 Cancel
	🕡 Help
00:15:00	
True	×
True	
	True

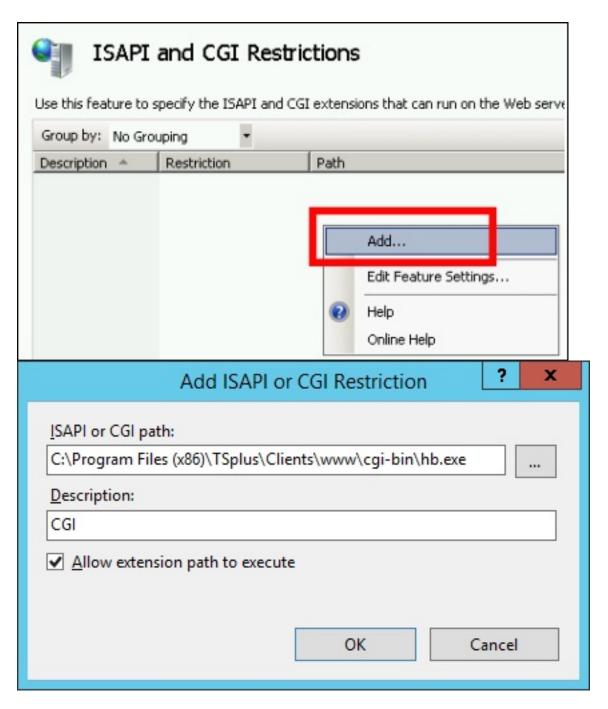
3. Configure CGI extension permission

Now, the last step is to allow the CGI extension to run on the server. Click on the "ISAPI and CGI Restrictions" icon. This can be found by clicking on the machine name in the menu on the left

side of the window.



On the "ISAPI and CGI Restrictions" page, click "Add ..." on the right side of the window. Now specify the full path to the "hb.exe" file hosted in the TSplus folder. Be sure to check the "Allow extension path to execute" option, as Illustrate the following images:



Jse this feature to	specify the ISAPI a	nd CGI extensions that can run on the Web server.
Group by: No Gr	ouping 🔹	
Description	Restriction	Path
Active Server P	Allowed	%windir%\system32\inetsrv\asp.dll
ASP.NET v2.0.5	Allowed	%windir%\Microsoft.NET\Framework64\v2.0.50727\aspnet_isapi.dll
ASP.NET v2.0.5	Allowed	%windir%\Microsoft.NET\Framework\v2.0.50727\aspnet_isapi.dll
ASP.NET v4.0.3	Allowed	%windir%\Microsoft.NET\Framework\v4.0.30319\aspnet_isapi.dll
ASP.NET v4.0.3	Allowed	%windir%\Microsoft.NET\Framework64\v4.0.30319\aspnet_isapi.dll
CGI	Allowed	C:\Program Files (x86)\TSplus\Clients\www\cgi-bin\hb.exe

Make sure that in CGI section of your server, "Default Web Site" and "cgi-bin" the setting "Impersonate User" is set to "True".

🖣 Internet Information Services (IIS) Manager	_ D X
	😰 🖂 🚱 •
File View Help	
Connections Conne	Actions
configurations recently approached in residenting, stocation pather benefits web alley (girbin 2	• <u>1</u> .:

Give full permission to user "IUSR" in the directory "C:\Program Files (x86)\TSplus\Clients\www\cgi-bin"

Give full permission to user "IUSR" in the directory "C:\Program Files (x86)\TSplus\Clients\webserver\twofa"

4. Add Mime types in IIS

Open a command prompt as an administrator and run the following commands:

%SystemRoot%\system32\inetsrv\appcmd set config /section:staticContent / +[fileExtension='.dat',mimeType='text/plain']

%SystemRoot%\system32\inetsrv\appcmd set config /section:staticContent / +[fileExtension='.',mimeType='text/plain']

Restart IIS.

5. Configure IIS Directory Permissions

Give full permission to the group "Everyone" in the directory "C:\inetpub\wwwroot"

6. Configure TSplus

Go to the Web Server tab of the AdminTool, then choose the "Use a Different HTTP server" option:

TI T	Splus - Administration Conso	le -	-1	×
		Remote Access Management Console		
命 □	HOME	Default HTTP web server A built-in HTTP Web Server is provided with TSplus However, you can use a different one (IIS or Apache for example). O Use the built-in HTTP web server		
¢	PRINTER	Use a different HTTP web server When using IIS or Apache, its HTTP port number must be set to 81. (Tunneling forwards this 81 port into the public HTTP port 80)		
O	WEB			
	Web Portal HTTPS	Change the Web Server root path You can change the Web Server default root path. The current Web Server root path is: C:\Program Files (x86)\TSplus\Clients\www Select a new Web Server root path		
	Web Server	c. a rogitali i nes (xoo) (spitas (cheries (www		
₽	FARM			
å	SESSIONS	Web servers options		
g	SYSTEM TOOLS	Change the HITP/HITPS port numbers Will not change IIS or Apache port settings HITP: 80		
鐐	ADVANCED	HTTPS: 443		
చి	ADD-ONS	Save and Restart Web Server		
©7	LICENSE			

Then, in the same window, click on "Select a new Web Server root path", and put the path of the IIS directory, which should be something like: "C: \ inetpub \ wwwroot". Now click on "Save and Restart the AdminTool".

ТДТ	Splus - Administration Console		×
		Remote Access Management Console	
命 □	HOME	Default HTTP web server A built-in HTTP Web Server is provided with TSplus However, you can use a different one (IIS or Apache for example).	
_	PRINTER	Use the built-in HTTP web server Use a different HTTP web server When using IIS or Apache, its HTTP port number must be set to 81. (Tunneling forwards this 81 port into the public HTTP port 80)	
O	WEB		1
	Web Portal	 Change the Web Server root path 	L
	HTTPS	You can change the Web Server default root path. The current Web Server root path is:	L
	Web Server	C:\Program Files (x86)\TSplus\Clients\www Select a new Web Server root path	L
≣⊡	FARM	After clicking on 'Save', the new Web Server root path will be: C:\inetpub\wwwroot	
8	SESSIONS	Web servers options	
ą	SYSTEM TOOLS	Change the HTTP/HTTPS port numbers Will not change IIS or Apache port settings HTTP: 80	
钧	ADVANCED	HTTPS: 443	
చి	ADD-ONS	Save and Restart Web Server	
©7	LICENSE		

The following messages will appear:

disabling Built-in HTTP	<
The built-in HTTP will not start anymore. Make sure that one other HTTP web server is active on port 81	
ОК	
Root Folder Change	
Your web root path is now: C:\inetpub\wwwroot	
ОК	

Wait. The Admintool will be closed automatically. Then open the Admintool again and click on the Web tile.

Finally, restart the web servers:

TSplus - Administration Conso	le	- X
TSPLUS	Remote Access Management Console	
П номе		
	Ţ.	\bigcirc
	Computer name: DESKTOP-SCVIIVH Private IP 192.168.1.22	http://localhost
S WEB	Public IP 78. RDP port 3389 🥢	The built-in HTTP server is listening on port 80
FARM	Connections: 1 Q	The HTTPS server is listening on port 443
SYSTEM TOOLS	System Audit - No issues found on the second	
없 ADVANCED	Version 💷 🖙 - You are using the latest version	
값 ADD-ONS	License Activated - Enterprise edition - 25 users	
	End of support date:	
	English •	🕜 Help

7. Test with local host

Warning: Use a different user account.

If you try with your current user account from your own RDP session to the server, then you will be disconnected and not be able to reconnect.

TSPLUS Log on
TSPLUS John ✓
O HTML5 ● RemoteApp Log on

Using servers behind Reverse Proxy

It is possible to use servers behind reverse proxies via xhr-polling, with some limitations.

<u>As described</u>, Websockets are not part of HTTP protocol, even if first http request looks like http request, actually, it isn't, therefore most known reverse proxies do not support Websockets and drop many important areas of first Websocket request.

If you know that the server is behind reverse proxy, disable Websockets by setting this option in Clients\www\software\html5\settings.js :

disablewebsocket = true;

That will enforce the usage of XHR-polling and avoid time delay when connecting.

If you do not have a file named "settings.js" in the "C:\Program Files (x86)\TSplus\Clients\www\software\html5" folder, then your TSplus version is older and this documentation does not apply. Please update your system first or contact support.

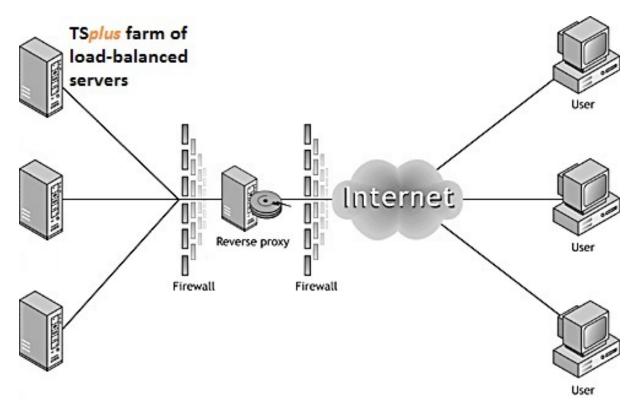
Please note that the usage of XHR-polling is not as stable as Websockets due its connection nature.

The other limitation using Xhr polling via reverse proxy is the poor support on files upload. While working with XHR in direct connection, done for example via Apache reverse proxy, Apache can accidentally interrupt the file's upload.

Using the Reverse Proxy Server Feature

This feature is available in the TSplus Enterprise Edition.

The Reverse Proxy system acts as an intermediary for its associated servers to be contacted by any client. The advantage of using a reverse-proxy is simple: you will no longer need to create as many port redirection rules as your number of TSplus servers. Whether or not you are using the load balancing feature, you need to activate it in order to connect using the reverse proxy. In TSplus, it provides a unique access point to a farm of load-balanced TSplus servers:



This unique access point will be your Gateway Portal Server. Since this server is going to be accessed remotely, you will need to set up one port redirection rule on your router, including the http or https ports depending on your preference (80 being the default port for http and 443 for https).

Click on the Farm Tab, then click on the Reverse-Proxy tab:

🚖 Gateway Reverse-Proxy N	Manager 📃 🗖 🗙
Gateway Status Gateway Reverse-Proxy Mo To enable it, add some Appli	
Gateway Server	
Gateway Public IP / DNS:	92.137.136.32
Protocol:	
Load-Balancing:	Enable Load-Balancing
Applications Servers	
Add an Application Ser Server 1 (SRV-TSplus1 - 19 Server 2 (SRV-TSplus2 - 19 Server 3 (SRV-TSplus3 - 19 Server 4 (SRV-TSplus4 - 19	92.168.1.201) 92.168.1.202) 92.168.1.203)
Edit Application Serve	ver Remove Application Server
Save Ga	ateway Reverse-Proxy Settings

- The Gateway Public IP must be set with a fixed valid IP address.

•

Select Http or Https for your preferred connection method, the servers of your farm must be able to communicate with eachother on either port 80 or 443, depending on which connection method you use. It is also important that your windows firewall don't block these ports.

Enable the load-balancing feature if you wish to load-balance your farm. If you do not activate this feature, you will need to assign the servers of your farm to the Users or Groups. More information on this subject can be found <u>here</u>.

Click on "Add an Application server" and fill in the Display Name for your server, its hostname in the Internal Name field and its Private (LAN) IP address, then click on "Save".

🚖 Application Server	
Display Name: Internal Name: (srvX)	
Private (LAN) IP:	
	Save Cancel

Once you completed your list of servers, click on "Save Gateway Reverse-Proxy settings" and restart the Web services located in the Admin Tool's Web tile.

Reverse-Proxy and Generated Connection Clients

You can generate a Connection Client which will connect to an Application Server through the Reverse-Proxy Server.

To do so, assuming that your gateway has public IP 1.1.1.1 and your backend server has internal name "srv2", then use the special URL 1.1.1.1:443/~~srv2 in the server address field of the Connection Client Generator.

For example:

•

Wind	dows Client Generator	_ ×
<u>General</u>	Display Remote Desktop client Seamless client	Local resources Program Security Load-Balancing
Jerver	Server address	Port number
	246.14.245.12:443/~~srv2	3389
User	Logon	Password
🍋	john	••••
	Domain name (without extension)	
Preferre	d display mode	client
	Disable background & animations for better performance	mances Fast network or Fiber optic
Client nan	ie: john.connect	Create Client

Don't forget to also check this box:

Enable Load-Balancing? Use Load-Balancing Gateway Web port number 80 When 'Use Load-Balancing' is checked, it enables using the Gateway with Load-Balancing to connect to an Application Server of the farm. Prior using this advanced feature, please read our documentation	eneral	Display	Remote Desktop client	Seamless client	Local resources	Program	Security	Load-Balancing
When "Use Load-Balancing" is checked, it enables using the Gateway with Load-Balancing to connect to an Application Server of the farm.	inable l	.oad-Bala	ancing ?			-		
with Load-Balancing to connect to an Application Server of the farm.		🗹 Use	Load-Balancing Gate	eway Web port nu	mber 80			
with Load-Balancing to connect to an Application Server of the farm.		When 'U	Jse Load-Balancing' is che	ecked, it enables u	using the Gateway			
Prior using this advanced feature, please read our documentation			-		-			
		-						
		Prior usir	ng this advanced feature.	please read our d	ocumentation			
		Prior usir	ng this advanced feature,	please read our d	ocumentation			
		Prior usir	ng this advanced feature,	please read our d	ocumentation			
		Prior usir	ng this advanced feature,	please read our d	ocumentation			
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		Prior usir	ng this advanced feature,	please read our d	ocumentation			
		Prior usir	ng this advanced feature,	please read our d	ocumentation			
		Prior usir	ng this advanced feature,	please read our d	ocumentation			
ent location: C:\Users\Admin\Desktop Browse	ent loca							
		tion:	C:\Users\Admin\Desktop					Create Client

Unless you want to connect to a given Application server.

TSplus Virtual Printer

The TSplus virtual printer is a new alternative to classic remote desktop printing solutions, which can be unreliable, hardware dependent and difficult to manage. The virtual printer's unique compression algorithm improves the transit speed of remote print jobs by minimizing data transfer while maintaining image quality.

Note: The TSplus HTML5 client is not supported and it requires the TSplus Universal Printer.

Benefits

- · Single-user and multi-user environment support.
- Zero configuration is required.
- Works with any virtual machines.
- Mixed 32 and 64-bit environment.

Pre Requisites

TSplus virtual printer OS compatibility list, in 32 and 64-bit::

- Windows Vista
- Windows 7
- Windows 8
- Windows 8.1
- Windows 10
- Windows Server 2008
- Windows Server 2008 R2
- Windows Server 2012
- Windows Server 2012 R2
- Windows Server 2016
- Windows Server 2019

The TSplus Virtual Printer is compatible with:

- The TSplus generated client
- The TSplus RemoteApp client
- The TSplus RemoteApp plug-in when using the Web Portal

• The Microsoft Remote Desktop client

It is not compatible with:

- The TSplus HTML5 client
- Hard Coded Thin-client devices where the client side setup cannot be installed.

Two Parts

The TSplus Virtual Printer is made up of two components:

- A server side component that comes installed on TSplus 12.70 Edition.
- A Desktop component that is installed on the end-user's Windows Workstation.

Both setups are available directly in the server side in the "C:\Program Files (x86)\TSplus\UserDesktop\files\addons" folder and named "Setup-VirtualPrinter-Server.exe" and "Setup-VirtualPrinter-Client.exe":

		ogram Files (×86) → TSplus → UserDesktop → file iger avec → Nouveau dossier		▼ 🛂 Re	chercher dans : addor	s 😕
le –	🕌 Microsoft SDKs 📃	Nom *	Modifié le	Туре	Taille	
r -	🍌 Microsoft Silverlight	latest_vp_exe.log	28/04/2020 16:47	Fichier LOG	4 Ko	
	🎉 Microsoft SQL Server					
	🎉 Microsoft Visual Studio	☑ latest_vp_msi.log	28/04/2020 16:48	Fichier LOG	120 Ko	
	🎉 Microsoft.NET	🔯 Setup-VirtualPrinter-Client.exe	04/05/2020 17:01	Application	9 205 Ko	
	🎉 Mozilla Maintenance Service	ស Setup-VirtualPrinter-Server.exe	04/05/2020 17:01	Application	14 724 Ko	
	🎉 MSBuild					
	🍌 NuGet					
	🏓 pgAdmin 4					
	DS-Tools					
	Reference Assemblies					
	🌽 RoboSoft4					
	🍌 TSplus					
	Lients					
	🌲 java					
	🎍 UniversalPrinter					
	📕 UserDesktop					
	🍌 files 📨					
	ilego 🕌					
	📙 .lego - Backup avant MAJ lego ex					
	📕lego					
	📕 addons					
	📕 apilangs					
	ico 💌					

Résumé des fonctionnalités

The Client setup is also available from your TSplus web server, using the link below:

"yourtsplusserveriporpublicdomain"/addons/Setup-VirtualPrinter-Client.exe

You can also perform a silent install of the Client via a command line, by executing the setup with the following parameters:

/SUPPRESSMSGBOXES /VERYSILENT /SILENT /no_ui

Getting started

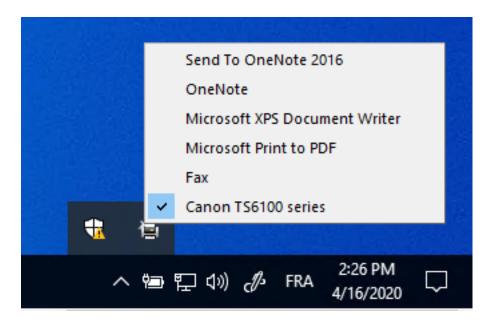
TSplus virtual printer is automatically installed during the first TSplus installation, and directly available during the trial period.

Once TSplus is installed, you will need to install the "Virtual Printer Client" on user's computer.

When you connect remotely to your TSPlus server using either **Microsoft RDP client** (mstsc), **TSplus generated client** or **Web Portal RemoteApp plug-in**, you will be able to print from your remote session to your local printer using the "Virtual Printer" printer. By default, the local printer selected is the local default printer.

You have 2 ways to change the local printer mapped to the "Virtual Printer" printer based on your situation:

1.If you are using the full desktop, then you can select which local printer to be used by using the virtual printer icon in the systray:



2.If you don't have access to the full desktop, you will need to use the "Virtual Printer Tool" named "VirtualPrinterTool.exe" located in "C:\Program Files (x86)\TSplus\UserDesktop\files". Note: you can either assign the application to the user, or make it run automatically on logon through the Virtual Printer advanced settings:

Virtual Printer Tool - Select your default local print	—	×
5. Canon TS6100 series		\sim
0. Send To OneNote 2016 1. OneNote 2. Microsoft XPS Document Writer 3. Microsoft Print to PDF 4. Fax 5. Capon TS6100 series		

Configuration

To access to the TSplus Virtual Printer control panel, please navigate through the AdminTool: ADD-ONS > Virtual Printer

🐺 TSplus - Administration Console	- 0	×
TSPLUS	Remote Access Management Console	
 Mome Applications PRINTER WEB FARM SESSIONS 	 Splus Advanced Security - Protect your server Protect your server from brute-force attacks and foreign intrusions. Block ransomwares before they destroy your files. Restrict users access and lock them in a highly secured environment. Iwo-Factor Authentication - Confirm your users' identity Passwords can be lost, stolen by phishing attacks, and very often they can even be cracked in a matter of minutes. Two-Factor Authentication solves this problem simply and effectively, and provides an additional security layer - sending a code to the user mobile device. 	
ADVANCED	Virtual Printer - Print on your local printer Setting up both server and client to allow local printing from remote sessions can be quite challenging. Virtual Printer makes local printing simple and accessible for every user.	
©⋥ LICENSE	I. ServerGenius - Monitor your server Server Genius helps to optimize software resources and to reduce unnecessary costs. Give facts and data about server usage (CPU, Memory, I/O, Disks). Track changes, resources usage and events with real-time email alerts. Track changes, resources usage and events with real-time email alerts.	

From the HOME section, you will be able to:

- Install the virtual printer
- Update the virtual printer
- Check the "Virtual Printer" printer properties
- Remove the Virtual Printer
- Set the Virtual Printer as the default printer
- Check the Virtual Printer status and pending documents

Ġ Virtual Printer - TSplus		– 🗆 X
æ	Virtual Printer	
М НОМЕ		
ស៊្វែ settings	Virtual Printer is installed	
	You are using latest version of Virtual Printer	
	VirtualPrinter is not the default printer	
	Virtual Printer Manager	
	Install the Virtual Printer	Remove the Virtual Printer
	Update the Virtual Printer	Set the Virtual Printer as the default printer
	Virtual Printer properties	View Virtual Printer
	Trial License : 14 days remaining. Click here to activate a new	license.
	Ū	

From the SETTINGS > Advanced section, you will be able to set up advanced parameters such as: "Run the virtual printer tool at logon" which will make the Virtual Printer Tool available on the remote session at logon. This parameter is mainly used to avoid the extra steps of assigning the "Virtual Printer Tool" to every users who needs it, making it available for everyone directly.

🕞 Virtual Printer - TSplus				- 🗆	Х
Ð	Virtual Printer				
Ф номе	Norduct				
SETTINGS		Name Run the virtual printer tool at logon	Value No		
Advanced					

From the LICENSE section, you will be able to:

• Activate your license

To activate it, connect to our <u>Licensing Portal</u> and enter your E-mail address and Order Number to download your license file. Then, click on the "Activate your License" button and upload it.

• Check your license status

🕞 Virtual Printer - TSplus	-	×
P	Virtual Printer	
பி номе ஜே settings	তন্য Activate your License	
	Iticense Status Iticense 14 days Serial Number: P19 Computer name: WIN-A1L00CN0E56	

TSplus Web App

TSplus Web App is a Progressive Web App (PWA) that leverages modern browser APIs to deliver a seamless remote access experience without cumbersome software installation or complicated connection clients. Designed to utilize industry standard HTML5 display and communication protocols, The TSplus Web App appears as a native connection solution, no matter what type of device you use.

Benefits

The new TSplus WebApp offers improved performance and value using the following improvements over legacy applications and connection clients:

Faster load times due to the small software footprint.

•

Lower data usage - TSplus Web App leverages common browser based traffic management to minimize data usage.

•

Seamless user experience - from login display to application rendering, the TSplus WebApp offers the user the appearance of native application use.

•

No more browser tabs or lost sessions due to too many open browser windows. The TSplus Web App behavior offers the same multitasking options as any other top level application.

Installation - PC

Navigate to your corporate TSplus Web Portal using your preferred common web browser (HTTPS configuration required).

Click on the + button located on the right side of the navigation bar. When prompted, click on 'Install'.

0	Web Access	5	×	+		-			×
←	\rightarrow G	e demo.tsplus.n	et			۲	ά	Θ	÷
					Install app? TSplus - Web Shortcut dutsplus.net Log on User name: Log on Log on	Cancel			

The installation only takes a second. It will create an icon on your desktop:



And the web app will open immediately upon completion:

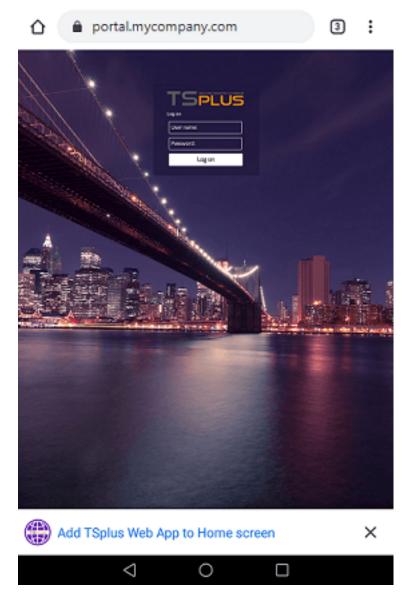
Web Access	0 7	:	0	×
TSPLUS Sohn O HTMLS Marca App				
Log on				2.

Installation - Android Mobile Device

Navigate to your corporate TSplus Web Portal using your preferred common mobile web browser. **HTTPS protocol is required on the TSplus server.**

The Web Portal will offer the option to add the TSplus Web App to your home screen, by clicking on the "Add TSplus Web App to Home Screen" message at the bottom of the window:

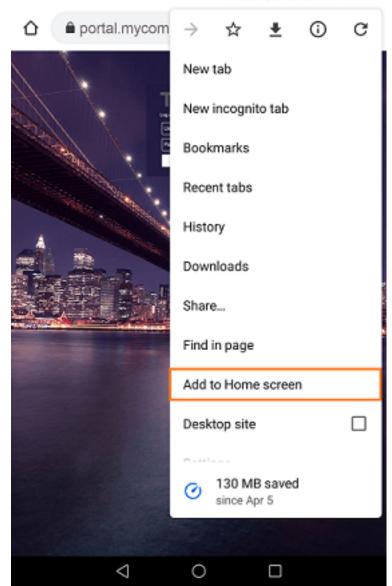
775B/s 非必 守100% 凾 1:10 PM



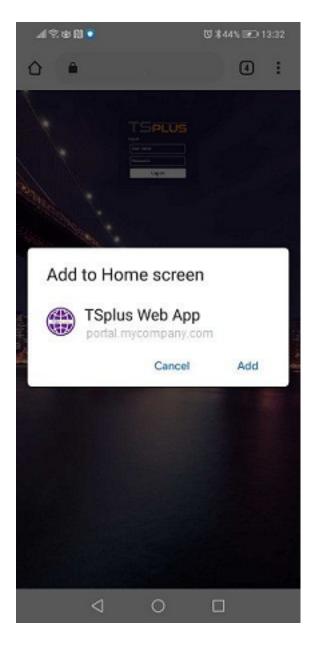
Or by clicking on the 3 dots menu on the top right of the window and clicking on "Add

After accepting the Add to Homescreen option, the user will see the following screen:

395B/s 非必 宗100% IM: 1:16 PM



Tap on the 'Add' button and the process is complete:

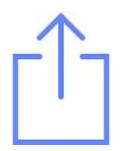


The TSplus Web App will now be accessible directly from the home screen of your mobile device.



Installation - Apple iOS Mobiles

The Web App installation process on iOS is similar to the Android process. Just navigate to the TSplus Web Portal using Safari Web Browser. Click on the Share button:



Then click on "Add to Homescreen".

Note: Chrome browser doesn't support the Web App feature on iOS.

Management

You can manage the Web App, by going to the TSplus Admin Tool Web - Web Portal section and clicking on TSplus Web App tile:

- 1 ∦ T	Splus - Administration Console				-	×
		Rem	ote A	access Management Console		
命 □	HOME APPLICATIONS		7	Web Portal Design		
_	PRINTER			Web Portal Preferences		
Q	WEB			Applications Portal		
	Web Portal			TSplus Web App		
	HTTPS					•
	Web Server		¢	Web Credentials		
	Lockout		•			
₽	FARM			Brench Are Clinet		
ది	SESSIONS		-	RemoteApp Client		
	SYSTEM TOOLS			HTML5 Client		
鐐	ADVANCED		ß	HTML5 Top Menu		
	ADD-ONS					
~						

The Web App is enabled by default, but you can disable it. It is possible to modify the Shortcut name, background and theme colors as well as the icon of TSplus Web App:

🌐 TSplus Web App Manage	ement	-		\times
Web App is enable	ed - Click to disable			
This functionnality require from a domain using HTT	es your TSplus web servert PS protocol.	to be a	ccessible	
Shortcut name:	TSplus Web App			
Background color:	#2A3443	S	elect	
Theme color:	#2A3443	S	elect	
lcon (format .png/.svg/.webp >= 144x144 pixels):	\Clients\www\pwa_icon.png	B	rowse	
			B Save	

Just click on "Save" to record your modifications.

Web Applications Portal: Parameters in URL address

If you want to bypass Terminal Service Plus standard logon Web Access page when using the <u>Web Applications Portal</u> and go directly to the Web Applications Portal page, you must specify several parameters in the URL address:

- user login
- user password
- user domain
- server
- port
- client type (HTML5 or Windows)

Here is an example of a full URL address for user "demo" with password "demo" on our demo server with an HTML5 client:

https://demo.tsplus.net/index_applications.html? user=demo&pwd=demo&domain=&server=127.0.0.1&port=3389&type=html5

The domain, server, port and type parameters being optional, the following URL address has exactly the same behavior:

https://demo.tsplus.net/index_applications.html?user=demo&pwd=demo

To use a Windows client, use:

&type=remoteaccess

Using those parameters in the URL address, you can go directly to the Web Applications Portal page.

You do not have to specify all these parameters at the same time: the parameters not specified will have their default configured value.

If you wish to bypass Terminal Service Plus standard logon when using the connect with the HTML5 client, check this page.

Web Applications Portal

Overview

Terminal Service Plus Web Application Portal provides a single, flexible solution that can streamline application and desktop deployment and life-cycle management to reduce IT costs. By centrally managing and web delivering on-demand applications, IT can improve the success rate of application deployment providing role-based management, application control, security and users support.

Terminal Service Plus Web Application Portal virtualizes and transforms Windows apps and desktops into a secure on-demand service.

With Web Application Portal, you will be able to publish Microsoft Windows applications (business applications, Office applications...) to the web.

As in Citrix, your users can access their applications directly from the Internet, simply by clicking on the application icon in the Portal web page, directly inside their own Internet browser.

Managing your Web Applications

The Web Application Portal feature is **fully integrated** in Terminal Service Plus. It means that all the applications published by Terminal Service Plus Applications Publishing feature can be used in the Web Applications Portal.

If you would like to know more about this publication process, feel free to read our documentation about <u>Application Publishing</u> and <u>Assigning Applications to Users or Groups</u>.

Designing your Web Applications Portal

In the Admin Tool, open the "Web" tab and click on the "Applications Portal" tile.

👖 TSplus - Administration Console - 🖷	8.0	- 0	×
	emote Access Management Console		
М номе			
	P Web Portal Design		
	Web Portal Preferences		
S WEB	Applications Portal		
FARM			
	😴 Web Credentials		
SYSTEM TOOLS			
段 ADVANCED	C RemoteApp Client		
슈) ADD-ONS	HTML5 Client		
ତିଙ୍କ LICENSE	8 HTMLS Top Menu		
Applications Porta			
Applications Page	•		
Title:	Remote Applications Portal]
Box Title:	Applications]
Box Log Off Text:	Log Off		
Box Color:	#AAAAAA Choos	;e	
Box Border Color:	#CCCCCC Choos	æ	
Pelp	Reset Reset	Save	

To generate a web access page with the Web Applications Portal feature activated, **check the "Enable Applications Portal" checkbox.**

You can customize your web access page to your liking, then click on "Publish" to publish this new web access page.

Note: You can change the box and the box border colors only for the Classic themes which can be changed on the <u>Web Portal Design tile</u>.

Using the Web Applications Portal

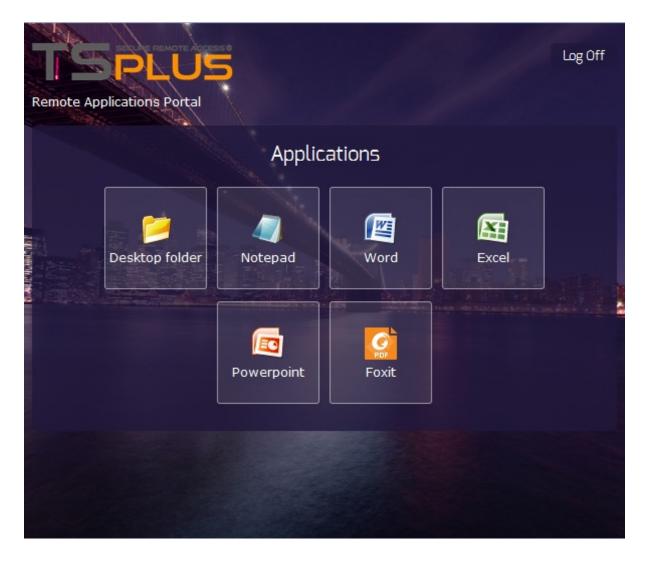
On this example we have published the new web access page with the default name "index".

To access it, open a web browser and go to http://your_server_name/ (in this example we use http://localhost, directly from the server itself).

The first web page displayed is the standard Terminal Service Plus web logon page:

TSPLUS
John ···· • HTML5 • RemoteApp
Log on

Once logged in, a new web page is displayed, this is the Web Applications Portal:



As you can see, the user gets an icon for every published application that he has access to. The user can now click on one or more icon, in order to remotely open the matching application in a new tab:

R	emote Ap	plication ×	Word		× Ex	cel	×	Notepad		× +		. D X
F) 🛞 http:	//localhost/so	ftware/htm	l5.html			≂ C'	Q , Recherch	er	☆	≜ ₽	⋒ ≡
9) - (2 -) =				Book1 - Micro	osoft Excel					_ = X
U	Hom	e Insert	Page Lay	vout Fo	rmulas	Data Rev	iew Vi	ew			(0 _ = X
Pas Clipb	te	Calibri B I U · · · · · · · · · · · · · · · · · · ·	* 11 * A A A *	≡ ≡ ∎ ≣ ≡ ≡ ⊈ ≇ ₽ Alignme	■	General ▼	For Cell	nditional Forr mat as Table Styles * Styles		Galance and a set of the set of	🖉 🖉 🎽 Fil	ort & Find & tter * Select * diting
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	А	В	С	D	E	F	G	Н	I	J	К	L 👗
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8 9												≡
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10												
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H 4		eet1 / Sheet	2 🖌 Sheet3	<u>∕</u> ♥⊅ /	i	i						▶
Read	У									100%	0	•

###

Web-Lockout

Since TSplus 11.40 release, brute-force attacks on the Web Portal are now blocked when users enter wrong credentials. After 10 attempts during a period of 15 minutes, the Web Portal will prohibit the user to logon for 30 minutes (customizable on the <u>Advanced - Lockout tab of the</u> <u>AdminTool</u>) :

	TSPLUS	•
in I	∟og on	
	TSPLUS	
	John	1
		x
	Headquarter	
	HTML5 RemoteApp	
	Foo many failed attempts. Please retry later.	
	Log on	

These are the default settings which are customizable on the hb.exe.config file located on the TSplus folder: TSplus\Clients\www\cgi-bin\hb.exe.config in the "appSettings" paragraph.

You can check all blocked connections and logs by users on the Lockout feature of TSplus:

- T ∦ TS	Splus - Administration Cons	sole				- 0	×
	TSPLUS	Remote Access Managem	ent Console				
ŵ	HOME	▲ × Reset					
	APPLICATIONS						
д	PRINTER	Name	Locked	Consecutive Failures	First Failure		
~~		DESKTOP-5RTR462\admin	Yes	10	July 17, 2019 13:54:47		
\odot	WEB	DESKTOP-SRTR462\james DESKTOP-SRTR462\john	No	5			
	Web Portal	DESKTOP-5RTR462\linda	No	2			
	HTTPS	DESKTOP-5RTR462\mary	No	3			
	Web Server	DESKTOP-5RTR462\root	Yes	10	July 17, 2019 14:00:24		
	Lockout	DESKTOP-5RTR462\william	No	2			
₽	FARM						
ది	SESSIONS						
Z,	SYSTEM TOOLS						
鐐	ADVANCED						
ది	ADD-ONS						
<u></u>	LICENSE	v					

This functionality is visible and active after the first Web Portal connection.

Important Notes

•

The Web Applications Portal feature is compatible with <u>Farm / Gateway configuration</u> and it also supports <u>load-balancing</u>.

•

In a Farm / Gateway configuration, the Applications must be published and assigned on every server of the farm at the moment.

•

In terms of Terminal Service Plus licensing, a user can open several applications at the same time without counting for more than 1 user.

Web Autologon: connect from web without portal

Overview

Terminal Service Plus Web Portal allows users to connect to their remote servers from any web browser simply by using their Windows credentials.

Sometimes however, you want to connect automatically when you launch a given URL address. This feature is called Web Autologon.

With Web Autologon, you will connect using the settings (login, password, ports, ...) specified in specific Terminal Service Plus files.

Web Autologon using HTML5 client

You will be able to connect directly by browsing to http://your-server/software/html5.html

You can modify the connection settings by editing the following file with Notepad or any text editor (such as Notepad++ - do not use MS Word):

C:\Program Files (x86)\TSplus\Clients\www\software\html5\settings.js

You will need to specify at least a login and a password in order to benefit from Web Autologon.

You might need to refresh the page on your web browser after modifying this file.

Web Autologon using the RemoteApp Web Client

You will be able to connect directly by browsing to http://your-server/software/remoteapp2.html

You can modify the connection settings by editing the following file with Notepad or any text editor (such as Notepad++ - do not use MS Word):

C:\Program Files (x86)\TSplus\Clients\www\software\remoteapp2.js

You will need to specify at least a login and a password in order to benefit from Web Autologon.

You might need to refresh the page on your web browser after modifying this file.

Enable multiple user sessions using the same credentials

If you want to enable multiple user sessions using the same credentials, then you can follow this procedure.

You can copy the index.html file located in:

C:\Program Files (x86)\TSplus\Clients\www

as many times as your number of users. You can rename it and then access it with the url: <u>http://</u><u>nameofyourserver.com/renamedindex.html</u>

Edit the paragraph corresponding to users credentials:

Access Configuration ------ var user = ""; // Login to use when connecting to the remote server (leave "" to use the login typed in this page) var pass = ""; // Password to use when connecting to the remote server (leave "" to use the password typed in this page) var domain = "";

You can copy the index.html file as much time as you want, renaming it with the username will make it easier for you to provide a personal link.

Web Credentials

Overview

Terminal Service Plus Web Credentials is a state-of-the-art unique feature, which allows users to connect with just an e-mail address or a pin-code.

With Web Credentials, you can secure your server's access with the e-mail address of a user, or with a simple pin-code generated by your business application. One of the great benefits of this feature is that these credentials (e-mail or pin-code) are pure web credentials : the user will not know the Windows user account he is currently using, and he does not need to know a real Windows login/password to connect to his application!

With Web Credentials, you will be able to define custom pure web credentials and match them to any existing Windows / Active Directory user account. The user will then be able to connect using these custom credentials, instead of the Windows / Active Directory ones.

Managing your Web Credentials

In the Admin Tool, open the "Web" tab and click on the "Web Credentials" tile.

TR T	Splus - Administration Console - 12.2	20.2.6 —		×
	TSPLUS Re	mote Access Management Console		
	HOME APPLICATIONS PRINTER	Web Portal Design Web Portal Preferences		
O	WEB	Applications Portal		
	Web Portal			
	HTTPS		_	
	Web Server	S Web Credentials		
₽	FARM			
8	SESSIONS	RemoteApp Client		
ą	SYSTEM TOOLS	HTML5 Client		
鐐	ADVANCED	8 HTML5 Top Menu		
ස	ADD-ONS			
©7	LICENSE			

The Web Credentials Manager will open and display this window:

Web Login	Web Password	Windows Login	Add a new Web Credential
1777 admin@mycompany.com ulia@mycompany.com		john admin julia	Edit Web Credential
			Remove Web Credential
			Web Access Page
			Enable Web Credentials Allow empty Password
			Show the Password field
			Mask Usemame field
			Preview
			Save

You can now create a new Web Credential by matching a custom login and (optional) password with an existing Windows / Active Directory user account, as shown below:

Web Login:	John
Web Password: (optional)	will match:
Windows Login:	John
Windows Passwor	d: ••••
Maximum number o	of concurrent session: 3
Cancel	Save

Since TSplus 9.50 version, you can also decide the maximum number of concurrent sessions for a user.

You can also edit and remove an existing Web Credential, thus changing or disabling any custom credentials you configured.

Alternatively, you can create web credentials via a command line:

- On the Windows Start Menu, on the execute field, type in: 'cmd.exe' (or in Programs/ Accessories > 'Windows Power Shell')
- Then, in order to go to the right folder, type: cd "C:\Program Files (x86)\TSplus\UserDesktop\files", then press Enter to validate
- To add a new Web Credential, type: AdminTool.exe /webcredentials-add your_web_login your_web_password your_windows_login your_windows_password maximum_concurrent_sessions
- To add a blank credential, type two double quotes: "" to indicate a blank text.
- To delete a web credential, type: AdminTool.exe /webcredentials-remove your_web_login

Important Notes

Please note the following limitations:

•

'[', ']' and '°' characters are not supported on the password fields.

•

In a <u>Farm / Gateway configuration</u>, Web Credentials only support the <u>load-balancing mode</u> (i.e. it does not work with server-assigned mode)

In a Farm / Gateway configuration with load-balancing mode, the Web Credentials must be defined on every server of the farm at the moment.

•

Web Lockout

TSplus Web lockout, introduced with Version 12.40, is a user interface for the Web Portal Lockout feature, to unblock accounts and edit advanced settings:

.¶∦ те	oplus - Administration Cons	ole				– 🗆 X
	TSPLUS	Remote Access Managem	ent Console			
ŵ	HOME	∧ × Reset				
	APPLICATIONS					
д		Name	Locked	Consecutive Failures	First Failure	
¢	PRINTER	2 DESKTOP-5RTR462\admin	Yes	10	July 17, 2019 13:54:47	
0	WER	DESKTOP-5RTR462\james	No	5		
U	WLD	2 DESKTOP-5RTR462\john	No	1		
	Web Portal	DESKTOP-5RTR462\linda	No	2		
	HTTPS	DESKTOP-5RTR462\mary	No	3		
	Web Server	DESKTOP-5RTR462\root	Yes	10	July 17, 2019 14:00:24	
		DESKTOP-5RTR462\william	No	2		
	Lockout					
₽	FARM					
ి	SESSIONS					
ez	SYSTEM TOOLS					
墩	ADVANCED					
చి	ADD-ONS					
<u>_</u>	LICENSE	~				

Lockout monitors failed Web Login attempts on your TSplus server. It logs attempts and automatically blocks the corresponding user after the authorized number of failed attempts has been reached.

You will easily see if an Address has been locked under the "Locked" column. The next column indicates the numbers of consecutive failures for each user.

On the Web Portal, a message indicates the user that too many failed attempts were made:

	550
Connecter	
Laura	_ ✓
	 X
• HTML5 • RemoteAp	 qc
Too many failed attempts. Please retry later.	
Log on	

Users can be quickly removed from this list, unblocked and whitelisted from the easy-to-use management console in the Web Tab of the AdminTool. Just click on the user you want to reset or unblock and then click on "Reset".

- 1 8 T	Splus - Administration Consol	2			_	×
	TSPLUS	Remote Access Management Co	onsole			
ŵ	номе	× Reset				
	APPLICATIONS	Name	Locked	Consecutive Failures	First Failure	
₿	PRINTER	ළ WIN-A1L00CN0E56\laura	Yes	10	August 26, 2019 15:33:05	
S	WEB					
	Web Portal					
	HTTPS					
	Web Server					
	Lockout					
₽	FARM					
ి	SESSIONS					
el S	SYSTEM TOOLS					
鐐	ADVANCED					
ది	ADD-ONS					
<u>_</u>	LICENSE	,				

The threshold for users blocking can be configured by the administrator, on the Advanced Settings Tab of the AdminTool:

👖 TSplus - Administration Console		Х
TSPLUS	Remote Access Management Console	
 HOME APPLICATIONS PRINTER PRINTER 	Backup / Restore your Server Parameters Advanced Settings	
€ web	Name Value Product Name Value Security Enabled Yes Session Limit 10 Lockout Login Interval 900 Scontextual menu Lockout Period 1800	
SESSIONS		
없 ADVANCED		
슈DD-ONS		
ලිතු License		

Check the Documentation to configure Lockout Settings.

02 août

TSplus Advanced Security Integration with Lockout

If a failed login attempt has been detected on the Web Portal, TSplus Advanced Security will indicate the **"Lockout Event"**, corresponding to a username on the Security Event Viewer:

"A failed login attempt was detected from Web Portal for user ... 1 Failed login attempt were detected for this user since..."

A failed login attempt was detected from Web portal for user NS950(HARRY. 1 failed login attempts were detected for this user since 02 août 13:14:26.

TSplus Advanced Security BruteForce Defender

TSplus Advanced Security Bruteforce Defender covers the **Client I.P. addresses aspect**. Hence, it also works for RDP connections.

<u>Failed Brute-Force connections attempts</u>, are also visible on TSplus Advanced Security Event Log (private IP addresses are excluded to avoid blocking proxy):

02 août A failed connection attempt was detected from IP address 192.99, 🧰 This IP address is not whitelisted and will be blocked following several failed attempts to connect. Provided username: NS4550/harry

"A failed connection attempt was detected from IP address This IP address is not whitelisted and will be blocked following several failed attempts to connect. Provided username: Harry."

For More information about Lockout and BruteForce Defender, check <u>this documentation</u> and the <u>Brute-Force Attacks Defender documentation</u>

Web logon page: How to change the logon Splashscreen

Overview

When the remote connection is loading, the HTML5 client is displaying a default splashscreen such as the screenshot below:



You can customize this content by modifying a JavaScript configuration file.

HTML5 Client

Creating your customized Splashscreen content

Any content in text or HTML can be used for the Splashscreen.

Also, if you need to use simple quotes (') or double quotes (") you will have to write a backslash before (' and ") instead of just the quotes.

Finally, please note that the content must be written in only 1 line.

The following example is a valid content for the Splashscreen:

This is my customized splashscreen

Please say "hello"!

It will display a title ("This is my customized splashscreen"), a text ("Please say hello!") and the animated ring picture as in the standard TSplus Splashscreen.

Modifying the Splashscreen data to use your own content

If you do not have a file named "settings.js" in the "C:\Program Files (x86)\TSplus\Clients\www\software\html5" folder, then your TSplus version is older and this documentation does not apply. Please update your system first or contact support.

Edit the file "settings.js" located in the "C:\Program Files (x86)\TSplus\Clients\www\software\html5" folder. We advise you to use a text editor such as Notepad or Notepad++ (do not use Word).

Search for the line starting by this:

W.splashscreencontent = "

Replace it completely by the following line:

W.splashscreencontent = "your customized content here";

Do not forget the ending double quotes and semi-colon (";).

If you wish to lengthen the duration of the logon splashscreen in HTML5, you can do so by modifying the value in milliseconds:

W.splashscreentime = 5000; //splash screen play time.

We recommend you clear your browser's cache after saving the changed html page.

Web logon page: How to close the Logon form after logon

Overview

On the Web logon page, when the user clicks on the "Log on" button, the chosen client (HTML5 or Windows) is opened in a new browser's tab.

Sometimes, and more specifically when using the Windows client, you might want to hide the logon form to the user, for instance in order to avoid the user to click again on the "Log-on" button.

Depending on the Internet browser used, you have two choices on how to change this default behavior. Both solutions requires you to modify a JavaScript file.

Solution A: Closing the Logon tab - For Internet Explorer only

In this solution, when the user clicks on the "Log on" button, the chosen client will be opened in a new browser's tab and the Logon tab will close itself. Depending on the Internet Explorer version, a small message window might be displayed to the user, asking him to confirm that he wants to close this tab.

Edit the file "common.js" file which is stored into the "C:\Program Files (x86)\TSplus\Clients\www\software" folder. We advise you to use a text editor such as Notepad or Notepad++ (do not use Word).

Search for these lines:

```
p = 'software/remoteapp.html';
window.name = " " + window.opforfalse;
if (cpwin != false) {
    cpwin.name = window.opforfalse;
    cpwin.location.replace(hostGateway + jwtsclickLinkBefore(getside(), p));
} else {
```

```
window.open(hostGateway + jwtsclickLinkBefore(getside(), p), window.opforfalse);
}
```

And replace them by those lines:

```
p = 'software/remoteapp.html';
window.name = " " + window.opforfalse;
if (cpwin != false) {
    cpwin.name = window.opforfalse;
    cpwin.location.replace(hostGateway + jwtsclickLinkBefore(getside(), p));
} else {
    window.open(hostGateway + jwtsclickLinkBefore(getside(), p), window.opforfalse);
}
window.open(",'_parent',");
window.close();
```

We recommend you clear your browser's cache after saving the changed JavaScript file.

Solution B: Redirecting the Logon tab to another web page - For all browsers

In this solution, when the user clicks on the "Log on" button, the chosen client will be opened in a new browser's tab and the Logon tab will automatically navigate to another web page.

You are free to use any existing Internet address (URL) such as "<u>http://google.com</u>" or "http:// your_intranet/your/page.html", or you can create your own web page by using "thankyou.html" as the URL and creating a file named "thankyou.html" in the "C:\Program Files (x86)\TSplus\Clients\www" folder and putting HTML content in it.

Edit the file "common.js" file which is stored into the "C:\Program Files (x86)\TSplus\Clients\www\software" folder. We advise you to use a text editor such as Notepad or Notepad++ (do not use Word).

Search for these lines:

```
p = 'software/remoteapp.html';
window.name = " " + window.opforfalse;
if (cpwin != false) {
    cpwin.name = window.opforfalse;
    cpwin.location.replace(hostGateway + jwtsclickLinkBefore(getside(), p));
} else {
    window.open(hostGateway + jwtsclickLinkBefore(getside(), p), window.opforfalse);
}
```

And replace them by those lines:

```
p = 'software/remoteapp.html';
window.name = " " + window.opforfalse;
if (cpwin != false) {
    cpwin.name = window.opforfalse;
    cpwin.location.replace(hostGateway + jwtsclickLinkBefore(getside(), p));
} else {
    window.open(hostGateway + jwtsclickLinkBefore(getside(), p), window.opforfalse);
}
window.location.href = "http://google.com";
```

We recommend you clear your browser's cache after saving the changed JavaScript file.

Web logon page: How to open the HTML5 client in the same tab

Overview

On the Web logon page, when the user clicks on the "Log on" button, the HTML5 client is opened in a new browser's tab.

You can change this behavior and have the HTML5 client to open in the same browser tab as the Web logon page by modifying a JavaScript file.

Modifying the custom.js file

Edit the file "custom.js" file which is stored into the "C:\Program Files (x86)\TSplus\Clients\www" folder. We advise you to use a text editor such as Notepad or Notepad++ (do not use Word).

Add this line:

var openinsamewindow = true;

We recommend you clear your browser's cache after saving the changed JavaScript file.

Modifying the common_applications.js file

If you are using Terminal Service Plus Web Applications Portal feature, then you need to edit a second file. Edit the file "common_applications.js" file which is stored into the "C:\Program Files (x86)\TSplus\Clients\www\software" folder. We advise you to use a text editor such as Notepad or Notepad++ (do not use Word).

Search for these lines:

```
if (childurl != ") {
    child = window.open(childurl, childname);
    childrenWindows[childrenWindows.length] = child;
}
```

And replace them by those lines:

```
if (childurl != ") {
    window.name = childname;
    location.href = childurl + '#';
}
```

We recommend you clear your browser's cache after saving the changed JavaScript file.

Creating and Customizing HTML Web Access pages using the Web Portal Preferences and the Web Portal Design

Using the Web Portal Design and the Web portal Preferences, you will be able to create your own customized HTML Web Access pages - and there is no need to be a web developer!

Web Portal Design

TSplus - Administration Console	– 🗆 X
TSPLUS Remote Access Manag	gement Console
HOME Web Portal Design APPLICATIONS	
PRINTER Web Portal Prefere	ices
S WEB	
Web Portal	
HTTPS Web Server Credentials	
FARM	
SESSIONS RemoteApp Client	
SYSTEM TOOLS	
ADVANCED B HTML5 Top Menu	
슈퍼 ADD-ONS	
ତିଲ୍ୟ LICENSE	

With the Web Portal Design tab, you will be able to customize all the display and graphic settings, as well as add your own logo. You have the choice between a collection of 20 photos, or you can add your own. You can also set any color theme with the background color of your choice or you can use one of the classic themes.

Look & Feel		Header	_ ×
Theme:	Photo ~	Baseline:	pple and Systems Through Internet Size: 13
Photo:	Coffee V Choose	Background color:	#0A8AB1
Title:	Web Access	Logo:	ftware\java\img\header_web.png 📴 Browse
Logon Display Text:	Log on	-	SECURE REMOTE ACCESS®
Background color:	#6D4E3A		
Text color:	#FFFFF Choose		
Font	Verdana \sim	Footer Picture:	software\java\img\footer.png Browse
Field Labels		r icture.	soitware yava ving vooler.png
Usemame:	User name:		
Password:	Password:		
Domain:	Domain:		
2-Step Verification:	2-step verification:		
Log-on Button:	Log on	Pelp	Reset 🔍 Preview 🤮 Save

Some advanced tips:

- You don't have to click on a "Choose..." button if you already know a color code: just type it in the input.
- Be careful with the real size of the pictures: your page could be quite bad-looking if a picture is too big.
- Do not hesitate to use the "Preview" button on the bottom, it's fast and easy!

				x
Web Access	× (+			
€ ③ 127.0.0.1/preview.html	CQ	☆自	»	≡
	_			
	TSPLUS			
	Log on			
	User name:			
	Password:			
	Domain:	5		
	O HTML5 O RemoteApp			
	Log on			
/ Printers in	time CELLER AND AND			

Saving typed values and Resetting to default ones

When you close this window, all the values you typed and checked are saved.

If you want to reset these values to values by default, click on the "Reset" button on the bottom.

Web Portal Preferences

T& T	Splus - Administration Console		- 0	×
	TSPLUS Re	emote Access Management Console		
命 □	HOME	Veb Portal Design		
Ð	PRINTER	Web Portal Preferences		
S		Applications Portal		
	Web Portal			
	HTTPS Web Server	Credentials		
≣∷	FARM			
ල	SESSIONS	RemoteApp Client		
R	SYSTEM TOOLS	HTML5 Client		
鐐	ADVANCED	B HTML5 Top Menu		
దా	ADD-ONS			
©7	LICENSE			

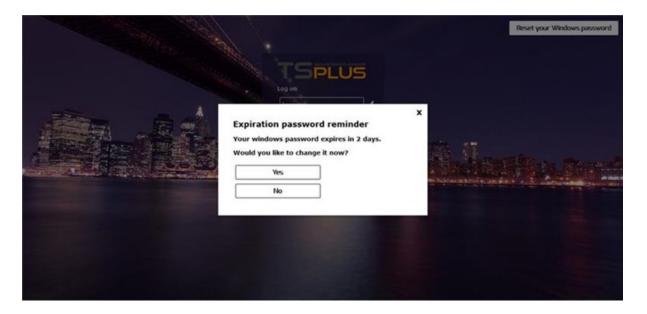
Preferences		_ ×
Default Values		
Login:		
Password:		
Domain:		
	Show the Dor	
Advanced		
Keyboard:	as_browser	
Access Type		
Available Clients:	HTML5	(iPad, iPhone, Android devices, computers)
	Remote App	(Windows PCs)
Gateway Portal:	Generate a G	ateway Portal enabled Web Page
Upload: Folder to selec	t files.	Download: Folder for all received files
User Desktop (defa	ault)	 User Desktop (default)
O My Documents		O My Documents
O WebFile folder		O WebFile folder
Custom folder:	Select	Custom folder:
Folder path from w		Folder where all downloaded files
select files to be up		will be stored on the Server.
		will be stored in the specified folder. Noad button or File Transfer button)
Use Explorer to select	ect files	O Use TSplus GUI
Windows password		
Display Windows p	assword reset butto	n
Display an alert wh	en windows passwo	ord expires in less than: 7 days
PHelp	Reset	Review Save

This tile allows you to configure the Web Access page:

- "Default Values": you can specify a default login, password and domain that will autopopulate the login fields. All of the settings present here are saved in the index.html file, which can be copied and renamed to your preference.
- "Show the Domain Field": when checked, the Domain field is included in the login information request.
- "Keyboard": only for advanced administrators who have special keyboard requirements.
- "Available Clients": choose between 2 types of web connection clients. If both are checked, the user will have the choice.
- "Gateway Portal": check it to activate a Gateway Portal enabled page. This feature adds an
 extra authentication step when you assign a server to a user or group. (More information on
 the Gateway feature can be found <u>here</u>).
- "Upload Download": choose source and destination paths for file uploads and downloads.

Since TSplus version 14.60, the section "Windows Password" has been added.

From this section, you can now add an alert message showing during the connection through the web portal, to inform the user about his password expiring date. For example, the following popup will show if the user's windows password expires in less than 3 days:



As mentioned it gives him the possibility to change it directly from the Web Portal using the popup displayed just below:

and a state of the		Reset your Windows password
	Reset your Windows password	×
	Your username - Ex: CORPY,ohndoe	
	Your old pessword	
	Your new password	and the second
	Confirm your new plassword	the Parlie south Ration is case, where the two parlies in the state of the south of the south of the south of the
	Validate	

You can also directly make the user able to change his windows at any time, by enabling the button "Reset your Windows password" through the Web Portal preferences.



Web Credentials

The "Web Credentials" section allows you to enable (or disable) the <u>Web Credentials</u> feature.

When using Web Credentials, you might want to allow empty passwords. If you only have Web Credentials with empty passwords, we recommend that you uncheck the "Show Password Field" option, in order to simplify even more the web login page.

T8 T	Splus - Administration Console - 12	20.2.6	– 🗆 X
	TSPLUS R	emote Access Management Console	
	HOME APPLICATIONS PRINTER	Web Portal Design Web Portal Preferences	
S	WEB	Applications Portal	
	Web Portal HTTPS	C Web Credentials	_
₽	Web Server	Veb Credentuais	
2	SESSIONS	RemoteApp Client	
	SYSTEM TOOLS	HTML5 Client	
	ADVANCED ADD-ONS	8 HTML5 Top Menu	
	LICENSE		

Remote App tile

ТЛ	Splus - Administration Consol	sle - 1	- 🗆	×
	TSPLUS	Remote Access Management Console		
ŵ	HOME			
	APPLICATIONS	P Web Portal Design		
₽	PRINTER	Web Portal Preferences		
O	WEB	Applications Portal		
	Web Portal			
	HTTPS			
	Web Server	S Web Credentials		
₽	FARM			
å	SESSIONS	RemoteApp Client		1
R	SYSTEM TOOLS	HTML5 Client		
ŝ	ADVANCED	8 HTML5 Top Menu		
ස	ADD-ONS			
©7	LICENSE			

This tile is for Windows clients specific settings.

You can choose your display between RemoteApp (remote connection without the remote desktop) or Standard RDP. You can also decide if you want documents to be printed on the user default printer, display a local preview or the local printer choice.

RemoteApp Client			×	
Display				
Resolution:	RemoteApp	•		
Pixel Depth:	32 bits	•]	
Web Printing Preferences				
Choose your web printer:	Print on the user default printer	•		
Web printer will be used for all web connections using RemoteApp client. Web printer will not be used for HTML5 connections.				
Help	Reset Reset	ave		

HTML5 client tile

ТИТ	Splus - Administration Conso	le - 🛄 —		×
	TSPLUS	Remote Access Management Console		
	HOME	Web Portal Design		
100	WEB Web Portal	Applications Portal		
₽	HTTPS Web Server FARM	S Web Credentials		
200	SESSIONS SYSTEM TOOLS	RemoteApp Client		
	ADVANCED	HTML5 Client	_	
	ADD-ONS LICENSE			

On this tile, you can edit the parameters for the HTML5 client web display. More information on this page.

HTML5 Client		×		
Menu bar:	All devices and computers $~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~$			
File Transfer:	✓ Enable File Transfer			
Ctrl+Alt+Del:	Mobile devices only \sim			
Top menu preference:	Transparency ~			
Default Colors:	16 bits \checkmark			
Connection Timeout:	40 ~			
Warning Messages:	Hide Warning Messages			
Sounds:	Play Sounds Theming:			
Background Color Preference	10841658 Choose color			
Add a logo to the background:	Browse Remove the logo			
Logon screen message:				
ABLE BGCOLOR=\'#FFFFFF\' BORD	ER=0 BORDERCOLOR=\'#FFFFFF\' CELLP/			
Change logon screen animated GIF:	Browse Display time msec.: 5000			
Smartphone and tablets Prefe Pointer settings	Use recommended values			
No pointer Small pointer	Medium pointer O Large pointer			
Transparency	95 %			
Software keyboard settings				
Use soft. keyb. Automatically show the software keyboard				
Transparency	the focus is in an entry field 95 %			
🕜 Help	Reset S	ave		

HTML5 Top Menu Tile

ТИТ	Splus - Administration Conso	ile -	- 🛛	×
	TSPLUS	Remote Access Management Console		
ଜ	HOME			
	APPLICATIONS	P Web Portal Design		
8	PRINTER	Ukeb Portal Preferences		
Q	WEB	Applications Portal		
	Web Portal			
	HTTPS			
	Web Server	S Web Credentials		
∎∋	FARM			
8	SESSIONS	RemoteApp Client		
R	SYSTEM TOOLS	HTML5 Client		
鐐	ADVANCED	HTML5 Top Menu		1
ස	ADD-ONS			-
©7	LICENSE			

This tile enables you to choose the applications to display on level 1 or 2 on the Top Menu of your generated remote web session. You can also edit these applications in order for them to appear on a specific client type : pc, mobile, ios... on or all of them.

HTML5 Top Menu Manage HTML5 Client Top Menu Icons Level 1 File Upload to Server Clipboard File Download to Client File Listing Right Click (mobile only) Mouse Drag (mobile only) Excel	Add a new Application Add a new Application Edit Application Remove Application Move Up Move Up Move Down
Excei	Move Down

Generating the HTML Web Access page

We advise you to try a "Preview" before generating a new HTML Web Access page.

Once you are pleased by the preview, then you can click on the "Publish" button to generate and publish the page to your web server's root folder.

You will be asked for a page name. If you want to overwrite your default page, use "index". In this case, the newly published web page will be accessible at: <u>http://your-server.com/index.html</u>