Kofax Communication Server

ASP Installation Manual

Version: 10.3.0

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KOFAX

Table of Contents

Preface

This manual describes TCOSS setup for an ASP model. It provides a step-by-step routine which guides you through the installation process.

We assume that you have the required skills and knowledge of KCS software and hardware products.

We also assume that you have the knowledge of installing our product, KCS directories, dot dot commands and have additional knowledge of Windows, registry handling and changes, and trace settings.

Important The Kofax Communication Server and its components formerly used the name TOPCALL. Some screen shots and texts in this manual may still use the former name.

This documentation has been done during the ASP system setup, so each print screen, trace and directory entry has been verified on a “live” system.

Some of the things may not be mentioned or described in this document, as we offer the manual on a “as-is” basis.

Chapter 1

Environment Used

All the tests covered within this manual have been done with a model 2xx system with TC10 main board, dual processor and 1Gbyte (1000 Mbyte) RAM. A 36Gbyte hard disk with a 4Gbyte WIN2000 SP2 partition and 3 TCOSS partitions with a size of 3Gbyte each.

A model 205 slave has been used for testing with one TC20 and one TC33 ISDN connected. A TC81 connects the model 205 with the TP80 of the model 2xx system. An ISDN line, EuroISDN with PTMP and MSN digits (range from 85 .. 89 possible) has been used. Additionally two manual FAX machines have been used for tests to fully simulate the sending/reception procedure.

Service provider setup is tested frequently with KCS model 300 series, TA10 main boards, TYAN S2688 Thunder HEsl-T with 1GByte memory and TA11 main boards IWILL DPX2 with up to 2GByte memory (single and dual processor systems in use). Line Server model 305 is used for both systems with BRI (basic rate ISDN) and PRI (primary rate ISDN) lines.

To keep things simple one MEDIA server and two STORAGE server (to simulate two different ASP customer) are installed which should show you the principle function and handling of such an ASP system. Nevertheless ASP systems might be installed as tandem systems it is even allowed to have media server and storage server on one machine which might be extended to a tandem system.

The high-end setup of such an ASP environment is definitely a TCOSS model 22x with up to 20 customer instances on each primary and secondary server and several MEDIA servers (not only one).

The TCOSS release used for testing of all the functionality offered by such an ASP system is 7.46.07 and higher (currently 7.62.01 is used), tests are done on a frequent basis with each new TCOSS release available.

All basic and advanced tests at KCS are done with two separate systems:

1. System “A” which is a 20 instances TCOSS server running as tandem system (primary server, secondary server) with a separate media server running standalone which has the routing directory. Multi-Voice is used, the “routing” Voice instance runs on the Media Server while a separate machine is used to handle 20 TCECP instances each connecting to a single TCOSS instance. Multi-status agents, multi-archive servers, multi-TC/Report instances and multi-TC/Link-SM instances are also in use.
2. System “B” is a single TCOSS server running 10 Line server model 305 (300 ISDN lines) which sends to another single TCOSS server running 10 Line server model 305 (300 ISDN lines). Voice is used in this scenario, 10 TCECP instances each connecting to a separate Line server model 305 send Voice data.

Chapter 2

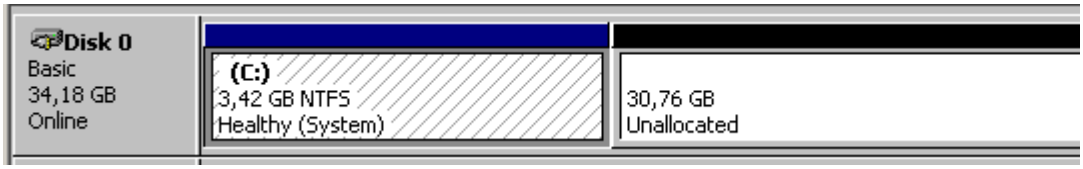
TCOSS Setup for an ASP Model

The following description is based upon one instance MEDIA server and two instance STORAGE server installations, both running on the same PC. This system can be setup with a minimum amount of PCs and can therefore be used for demonstration purposes for your customer

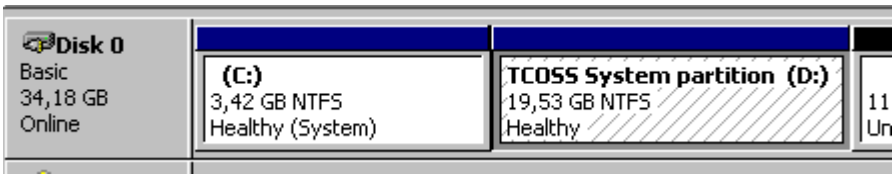
This section does not describe how to install WIN2000 or any service pack as it should be an advanced description for the experienced KCS technician.

1. Create a large D-partition for the TCOSS file system itself. In our example a 20Gbyte partition should be created.

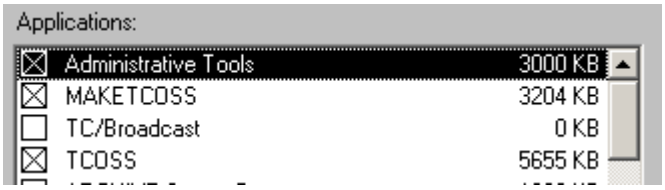
   Before formatting has been started:

   After formatting has been completed:

2. Install KCS server (7.46 has been used for our tests).
3. Select the following:

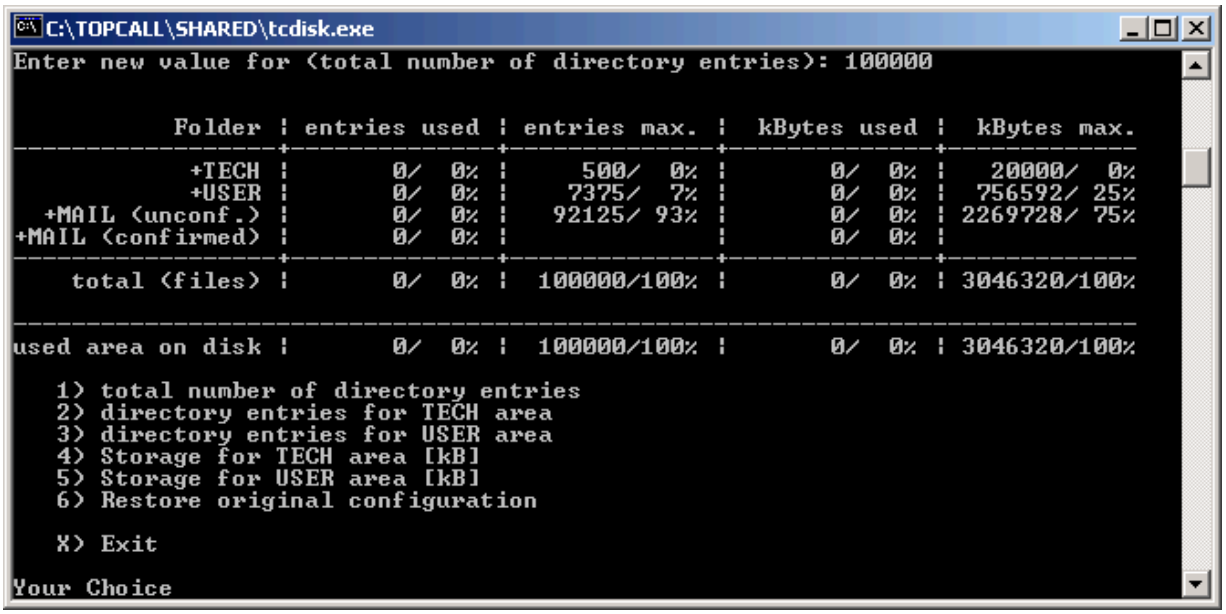
4. Important is the TCOSS application, switch into the submenu and select TCOSS (for media server), tcoss01 (customer 01) and tcoss02 (customer 02)

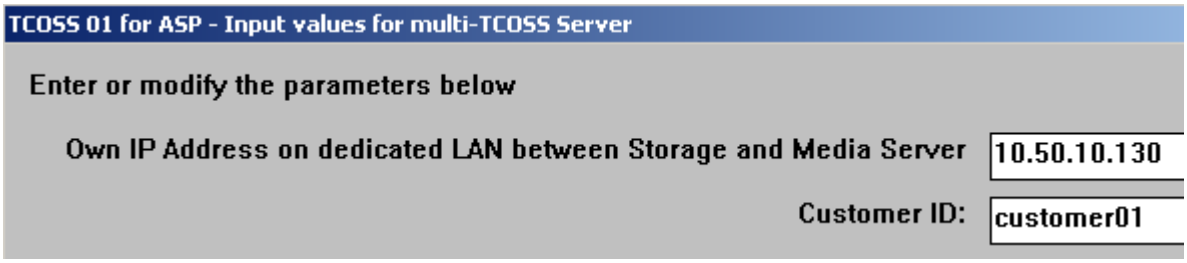
5. You can change the default KCS File Structure file name and path in KCS setup. In this example we entered `D:\KCS File Structure.tcoss` for the File Structure of the media server.
6. Format the media server instance TCOSS (media server can be created with small partition size, nevertheless in our case all instances are installed with 3 Gbyte size.)

```
Size of TCOSS File Structure in MB
30 .. 19936 (default=19936) ? 3000
Total number of directory entries reserved on harddisk
1000 .. 16000000 (default=201000) ? 100000
Creating tcoss file structure     .. ok
Format Parameters: 100000 directory entries, 3046320kByte data space
Check destination disk size       .. ok
Initialize boot area, clear disk  .. ok
Del. Directory  100000/ 100000    .. ok
Initialize Partition information  .. ok
Initialize Boot sector            .. ok
Initialize Section Info           .. ok
Initialize Section Table          .. ok
Initialize Data Blocks 100 %      .. ok
Check read Drive information      .. ok
```

7. The area for the media server has been defined as follows:

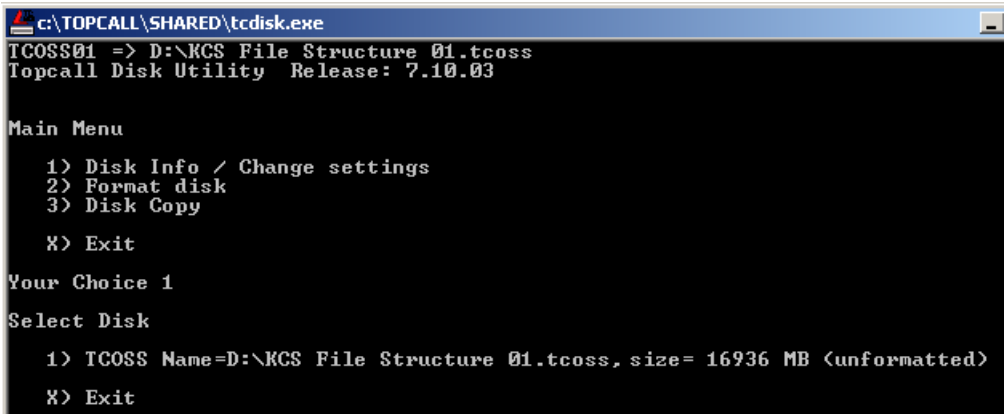


8. Important settings for the first storage server configuration, instance tcoss01.



   a. Dedicated LAN is not available as all instances are running on one machine. Nevertheless the own IP address has to be specified here as during operation TCP Bind commands are used. It is currently unclear whether an empty IP address is also working or not (should be tested later on).

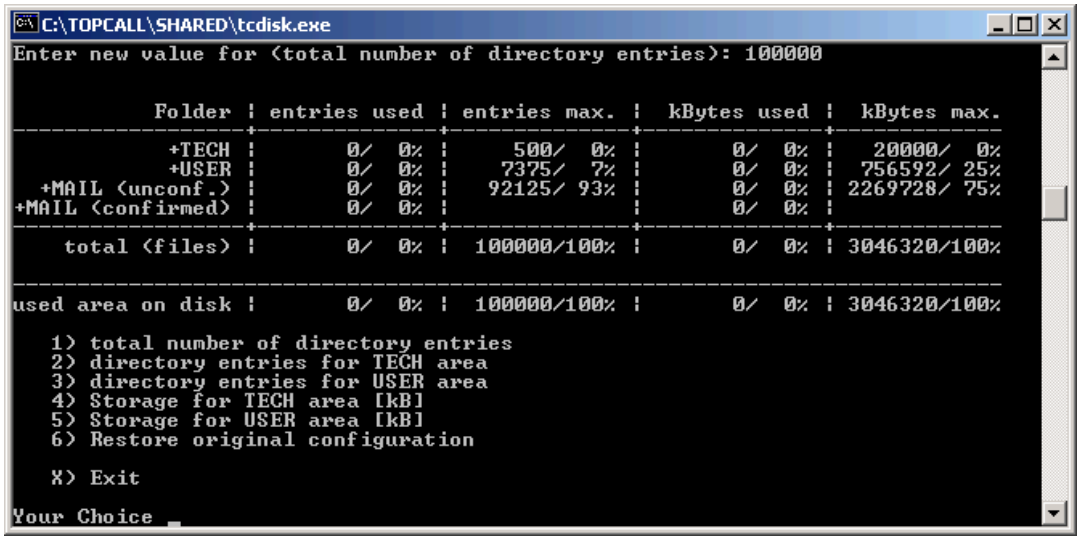
   b. The next screen offers you again the TCDISK format option.



   c. Select 1 – to get the disk information, afterwards we have to format the tcoss01 partition for customer 01, select menu item 2 – format. This will create a second KCS File Structure on the D-partition:

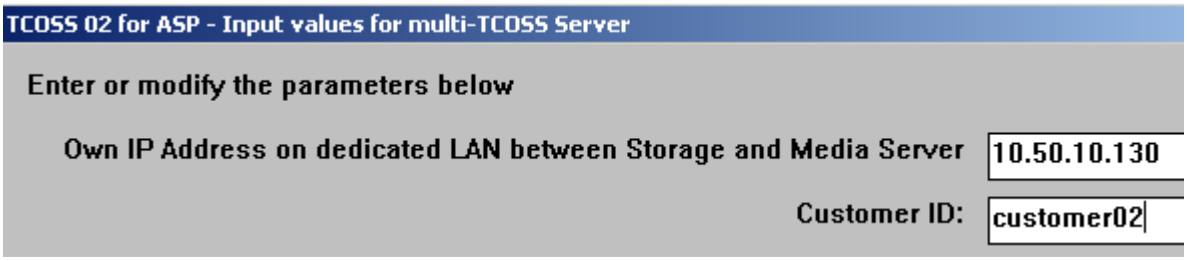
```
1) TCOSS Name=D:\KCS File Structure 01.tcoss, size= 16936 MB (unformat)
X) Exit
Your Choice 1
Size of TCOSS File Structure in MB
30 .. 16936 (default=16936) ? 3000
Total number of directory entries reserved on harddisk
1000 .. 16000000 (default=201000) ? 100000
Creating tcoss file structure     .. ok
Format Parameters: 100000 directory entries, 3046320kByte data space
Check destination disk size       .. ok
Initialize boot area, clear disk  .. ok
Del. Directory  100000/ 100000    .. ok
Initialize Partition information  .. ok
Initialize Boot sector            .. ok
Initialize Section Info           .. ok
Initialize Section Table          .. ok
Initialize Data Blocks 100 %      .. ok
```

```
Check read Drive information      .. ok
```

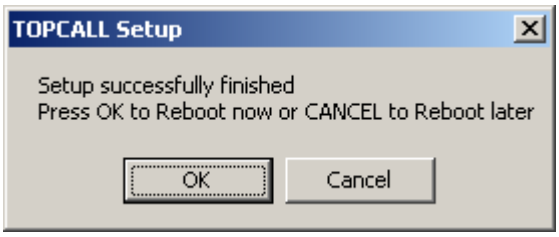


9. Install the second customer instance, tcoss02 for customer 02. Just select another customer ID for this instance and follow the same procedure as mentioned above. Formatting is also done the same way as previously.

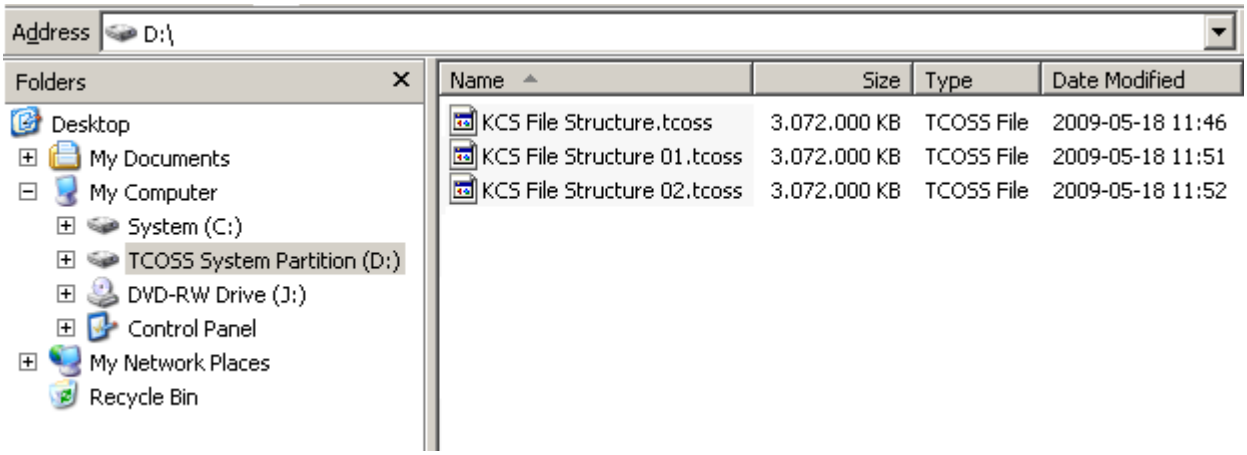
Note No screen shots are added as the settings are identical to the first customer instance.



10. After formatting is complete, the following setup screen should be displayed:



11. Before rebooting, open the explorer and select **Partition D**. You must see three tcoss files structures, otherwise you have a problem.



12. Reboot the PC.

13. After the reboot is complete, configure the MEDIA server. As a first step, configure a “standard” TCOSS system as usual to test the whether all FAX, TLX interfaces are working.

    A simple FAX configuration might look as displayed below. Channels 04 and 05 are standard ISDN basic rate FAX channels, channel 03 is a tracer module channel (not supported anymore), channel 00 is a TCUAS channel which allows you to use ..commands via pipe.

```
Software Hardware Assignment

Channel SW-Modul Speed HW-Modul Slot Slave

00)      AS              RPC        6    1.R.
01)
02)
03)      TR              TC20       LO   1.2
04)      IF              TC20-A     LO   1.2
05)      IF              TC20-B     LO   1.2
```

14. Configure the ISDN channels for your purpose (not mentioned any further here)! After you finished your installation, install it with the option “install configuration local”.

```
03) Get configuration from multi-TCOSS instance
04) Install configuration via net
05) Install configuration local
06) Install configuration to multi-TCOSS instance
```

15. Open the registry editor regedt32, open `HKLM\SOFTWARE\TOPCALL\TCOSS` and insert the following manually:

```
[HKEY_LOCAL_MACHINE\SOFTWARE\TOPCALL\TCOSS]
"AppendTrace"=dword:00000001
"MaxTraceFiles"=dword:00000002
"MaxTraceFileSize"=dword:000003e8
```

16. Open `[HKEY_LOCAL_MACHINE\SOFTWARE\TOPCALL\Boot]` and manually edit the value Startup.
from:

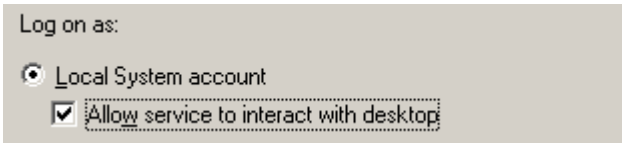
```
Startup REG_MULTI_SZ    TCOSS
                        TCOSS01
                        TCOSS02
```

to:

```
Startup REG_MULTI_SZ    TCOSS
```

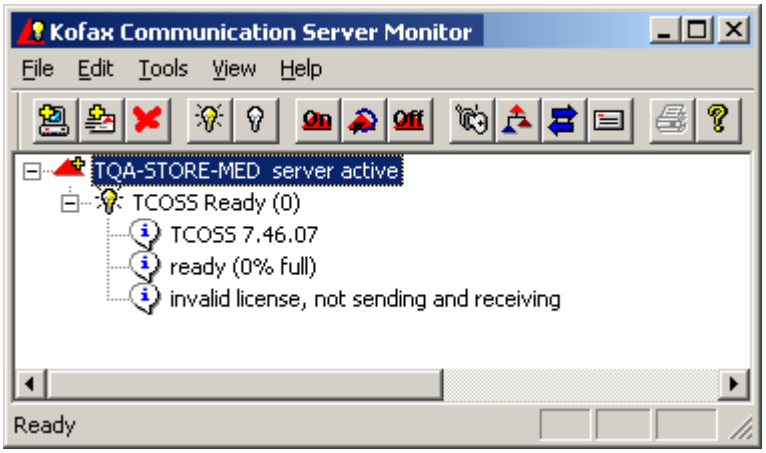
This is required to test the Media Server instance only and to prevent the service TCSRV from starting all three instances together.

17. To allow the TCSRV service interact with the desktop, select **start-programs-administrative tools-services**, click the **TCSRV service**, select the **log on** tab and enable the **allow service to interact with desktop** checkbox.



18. Open **TCMON32** from the menu, select **file**, add server, and type the name of your TCOSS server into the field (in our case TQA-STORE-MED).

19. Start the server and wait until it is started completely. After successful start-up and interface initialization, you must see the following status:



TCOSS has been started successfully, the release is displayed and a warning that no license is available is also displayed. So the first action is definitely to define a valid license for this KCS system.

20. Obtain a correct license from KCS and insert the license via the TCLT tool.

Special Hint

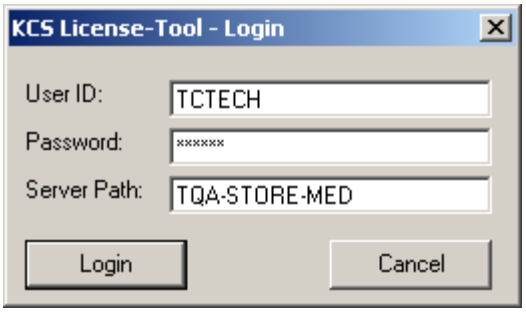
Most of our products still use NETBIOS as default protocol if not otherwise specified. TCLT is one of those products so when you try to login to TCOSS with its server name or IP address only, most properly an error 612 – login fails occurs.

To prevent this, do the following:

a. Open the registry editor `[HKEY_LOCAL_MACHINE\SOFTWARE\TOPCALL\TCLT\TCTI]` and add the following value manually:

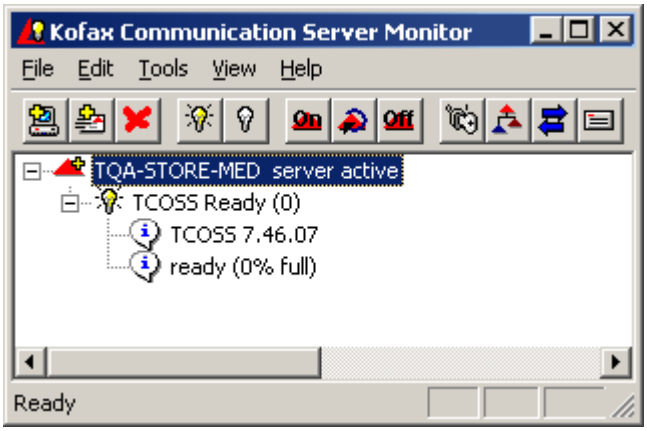
```
"LinkTypes"="TCP/IP" (REG_SZ)
```

b. Now start the TCLT and login with the following parameters:



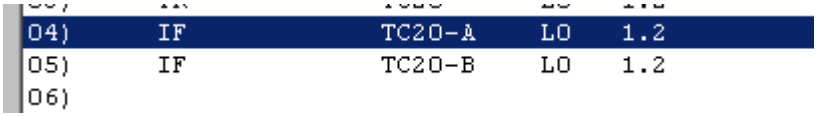
c. Login is possible now.

21. After the Licenses have been applied and TCOSS has been restarted, TCMON32 will show the following status:



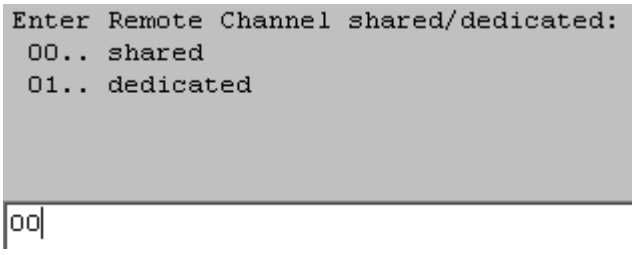
Important
Now the MEDIA Server is up and running but before you further progress through the installation, test all the lines within the MEDIA Server.
Test each FAX line, send on the line, receive on the line, and make an inbound distribution.
Only if all the lines used within the MEDIA Server work without problem, plan your next step.

22. After all your tests have been done successfully, start wconfig again for the MEDIA server and open the software-hardware assignment.

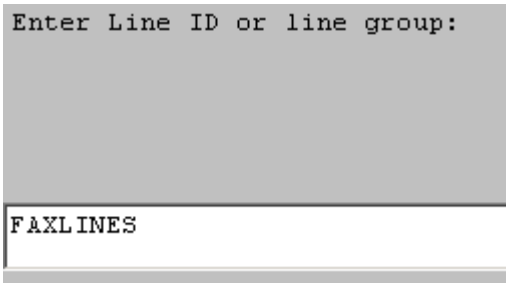


23. Double-click the first FAX channel, and select **Switch remote control mode of local Interface**.

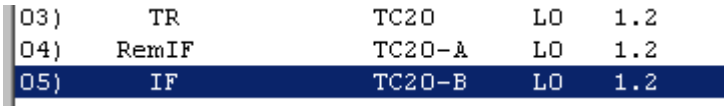
24. Select a “shared remote” channel by using **00** as config value.



25. Enter a value for a line ID or line group. We have used the value “FAXLINES” in our example.



26. Afterwards the software hardware assignment is changed to



27. Follow the same procedure for channel 05 or all channels which are installed in your system.

28. Start the registry editor regedt32 again, move to `HKEY_LOCAL_MACHINE\SOFTWARE\Topcall\TCOSS` and create a key RemoteChannels. Within that key create a value OwnIPAddress, REG_SZ, with the IP address of the Media Server.

```
HKEY_LOCAL_MACHINE\SOFTWARE\Topcall\TCOSS\RemoteChannels
"OwnIPAddress"="10.50.10.130" (REG_SZ)
```

29. Within the RemoteChannels section, create a key FAXLINES (this key is identical with the value selected within wconfig for the line ID or channel group). If you have used another name than FAXLINES, then use that name here. Within that section, create a REG_MULTI_SZ value with either all customers who are allowed to use that channel or simply define (All) if you want to share this channel for all customers.

```
HKEY_LOCAL_MACHINE\SOFTWARE\Topcall\TCOSS\RemoteChannels\FAXLINES
"CustomerList"=(All) (REG_MULTI_SZ)
```

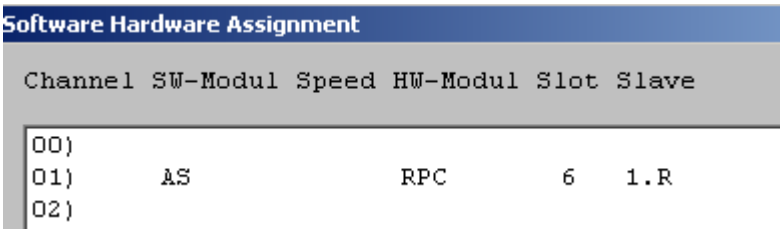
The installation of the MEDIA Server is now complete – we can now start with the configuration of the storage servers which belong to the customer instances.

30. Create another two wconfig directories, one for the TCOSS01 (customer01), the other for the TCOSS02 (customer02) instance.

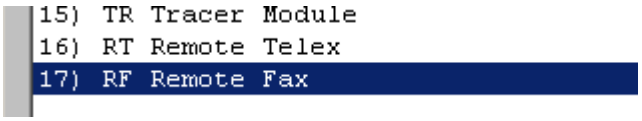
31. Start the wconfig program for the first instance TCOSS01. Open the software hardware assignment, delete the TCUAS channel defined on 00 and recreate it on channel 01. This has to be done as the

MEDIA server has already configured a TCUAS channel on 00, otherwise an error “All pipe instances are busy” occurs during operation.

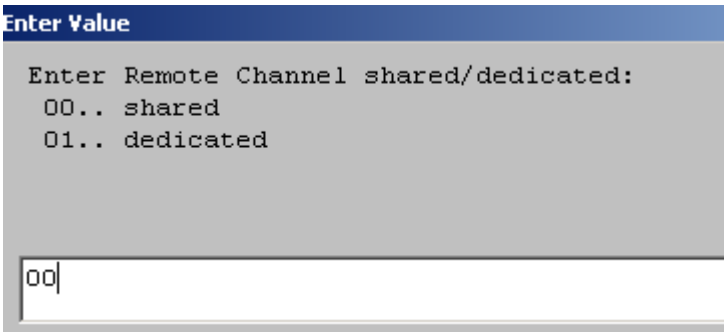
Note Follow the same procedure for the TCOSS02 instance except that assign channel 02 instead of channel 01 to the TCUAS channel.



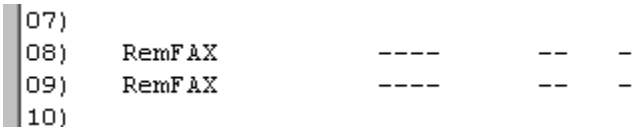
32. Configure FAX channels which should be used from that customer. Select any free channel, double-click and select **RF remote FAX** from the list



The next input asks whether you want to use it shared or dedicated.

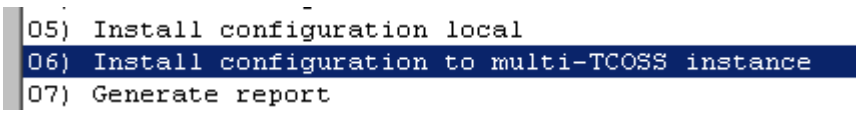


33. We are selecting a “shared” remote FAX channel. Create a second channel for this customer instance.



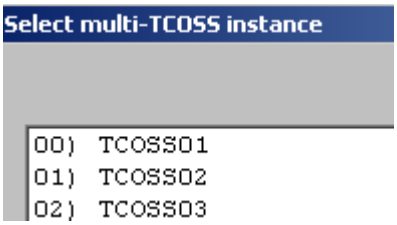
With the option above, only the TAM part can be configured (lines 1…50) , the TUM part is removed and cannot be changed.

34. If you are ready exit the configuration and select the **install configuration to multi-TCOSS instance** option.



A list of 20 different TCOSS instances is offered.

35. Select your instance (TCOSS01) and install it to the system.



36. Before starting this instance, open the registry editor and move to:

```
HKEY_LOCAL_MACHINE\SOFTWARE\Topcall\TCOSS01\RemoteChannels
```

You must see an empty REG_MULTI_SZ value called MediaServers.

37. Open this value and insert the IP address of the used Media Server. In our case as all instances are running on one PC, the own IP address must be specified here.

```
"MediaServers”=”10.50.10.130  (REG_MULTI_SZ)
```

38. Afterwards set the correct trace settings by

```
HKEY_LOCAL_MACHINE\SOFTWARE\Topcall\TCOSS01
"AppendTrace"=dword:00000001
"MaxTraceFiles"=dword:00000002
"MaxTraceFileSize"=dword:000003e8
```

Note Follow the same procedure for the TCOSS02 (customer02) instance. Take care that you set the TCUAS channel on a free channel and do the changes within the registry within section TCOSS02.

39. If you are ready with the installation of both customer instances TCOSS01 and TCOSS02, change the following registry value:

```
HKEY_LOCAL_MACHINE\SOFTWARE\Topcall\Boot
```

from:

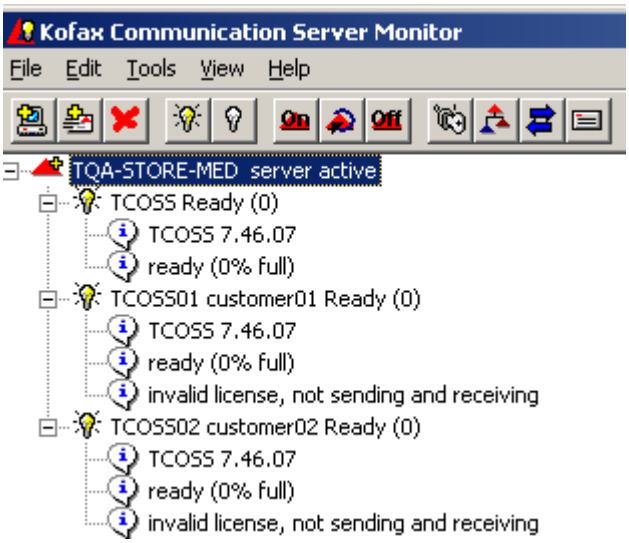
```
Startup REG_MULTI_SZ   TCOSS
```

to:

```
Startup REG_MULTI_SZ   TCOSS
                       TCOSS01
                       TCOSS02
```

40. Restart the complete service TCSRV via TCMON32. With the changes above, we let the service start all three instances instead of just one instance.

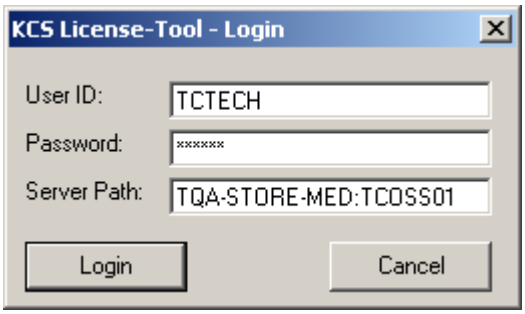
After you have restarted the service TCSRV, TCMON32 will display the following information.



You see that customers storage server do not have a valid license file. Therefore you have to apply a valid license for each involved storage server instance separately.

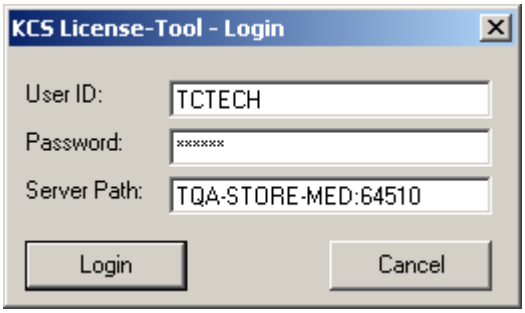
Important Make sure that you login exactly to the correct TCOSS instance. This is done with so called endpoints.

41. As we want to install the TCOSS01 (customer01) instance first we start the license tool and insert the following parameters:



You see that within the server path definition, an additional endpoint has been specified which is identical with the instance number.

42. For the first instance use TCOSS01 as endpoint. Alternatively, you can specify the “real” endpoint which is 64510 for the first instance.



On the next page you’ll find a correlation of endpoints to symbolic names definition.

Chapter 3

Port Numbering

This section describes the port numbering.

Single Server IP Port Numbering Plan

IP Port number	Symbolic name	Used for
64505	-	Storage server – media server connection
64508	TCOSS	Single TCOSS instance / client access
64509	ARCHIVE	Single TCARCH instance / client access
64510	TCOSS01	Multi TCOSS instance 01
64511	TCARCH01	Multi ARCHIVE instance 01
64512	TCOSS02	Multi TCOSS instance 02
64513	TCARCH02	Multi ARCHIVE instance 02
64514	TCOSS03	Multi TCOSS instance 03
64515	TCARCH03	Multi ARCHIVE instance 03
64516	TCOSS04	Multi TCOSS instance 04
64517	TCARCH04	Multi ARCHIVE instance 04
64518	TCOSS05	Multi TCOSS instance 05
64519	TCARCH05	Multi ARCHIVE instance 05
64520	TCOSS06	Multi TCOSS instance 06
64521	TCARCH06	Multi ARCHIVE instance 06
64522	TCOSS07	Multi TCOSS instance 07
64523	TCARCH07	Multi ARCHIVE instance 07
64524	TCOSS08	Multi TCOSS instance 08
64525	TCARCH08	Multi ARCHIVE instance 08
64526	TCOSS09	Multi TCOSS instance 09
64527	TCARCH09	Multi ARCHIVE instance 09
64528	TCOSS10	Multi TCOSS instance 10
64529	TCARCH10	Multi ARCHIVE instance 10
64530	TCOSS11	Multi TCOSS instance 11

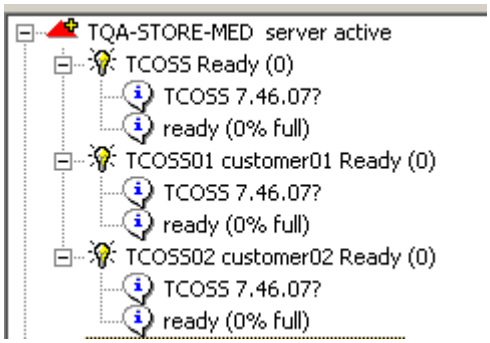
IP Port number	Symbolic name	Used for
64531	TCARCH11	Multi ARCHIVE instance 11
64532	TCOSS12	Multi TCOSS instance 12
64533	TCARCH12	Multi ARCHIVE instance 12
64534	TCOSS13	Multi TCOSS instance 13
64535	TCARCH13	Multi ARCHIVE instance 13
64536	TCOSS14	Multi TCOSS instance 14
64537	TCARCH14	Multi ARCHIVE instance 14
64538	TCOSS15	Multi TCOSS instance 15
64539	TCARCH15	Multi ARCHIVE instance 15
64540	TCOSS16	Multi TCOSS instance 16
64541	TCARCH16	Multi ARCHIVE instance 16
64542	TCOSS17	Multi TCOSS instance 17
64543	TCARCH17	Multi ARCHIVE instance 17
64544	TCOSS18	Multi TCOSS instance 18
64545	TCARCH18	Multi ARCHIVE instance 18
64546	TCOSS19	Multi TCOSS instance 19
64547	TCARCH19	Multi ARCHIVE instance 19
64548	TCOSS20	Multi TCOSS instance 20
64549	TCARCH20	Multi ARCHIVE instance 20
64387	-	TCARCHn – TCJUKE communication

Tandem Server IP Port Numbering Plan

Instance	Primary to secondary data link	Primary master to status agent Connection 1 / 2	Secondary master to status agent Connection 1 / 2
TCOSS	64256	64257, 64258	64259, 64260
TCOSS01	64261	64262, 64263	64264, 64265
TCOSS02	64266	64267, 64268	64269, 64270
TCOSS03	64271	64272, 64273	64274, 64275
TCOSS04	64276	64277, 64278	64279, 64280
TCOSS05	64281	64282, 64283	64284, 64285
TCOSS06	64286	64287, 64288	64289, 64290
TCOSS07	64291	64292, 64293	64294, 64295
TCOSS08	64296	64297, 64298	64299, 64300

Instance	Primary to secondary data link	Primary master to status agent Connection 1 / 2	Secondary master to status agent Connection 1 / 2
TCOSS09	64301	64302, 64303	64304, 64305
TCOSS10	64306	64307, 64308	64309, 64310
TCOSS11	64311	64312, 64313	64314, 64315
TCOSS12	64316	64317, 64318	64319, 64320
TCOSS13	64321	64322, 64323	64324, 64325
TCOSS14	64326	64327, 64328	64329, 64330
TCOSS15	64331	64332, 64333	64334, 64335
TCOSS16	64336	64337, 64338	64339, 64340
TCOSS17	64341	64342, 64343	64344, 64345
TCOSS18	64346	64347, 64348	64349, 64350
TCOSS19	64351	64352, 64353	64354, 64355
TCOSS20	64356	64357, 64358	64359, 64360

After you have applied all required licenses to the TCOSS instances, TCMON32 must show the following information:



The Media Server instance and the two customer instances are all ready, Licenses have been applied, sending and receiving is possible.

Chapter 4

Reception on a Shared Remote Channel

The TCOSS system is now up and running. You can now test the reception and sending abilities of the ASP system. As a first step, we are using an ISDN channel with PTMP connection with MSN ability.

We have MSN information 85, 86, 87, 88 and 89 available. MSN reception is based upon the following configuration settings:

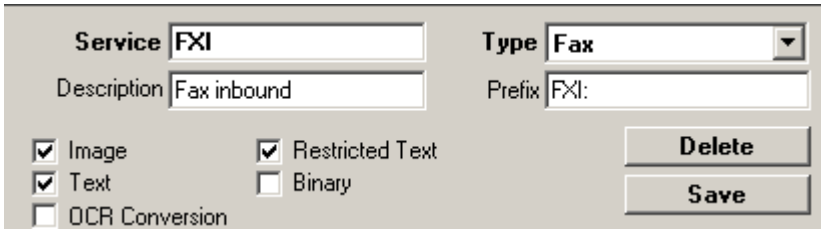
Note Fax specific settings (line 51 …300) are only used from MEDIA Server.

The configuration has been done the following way:

```
'FXI$ +    FAX$,  235      ** DDI or DID
:03 ,236            ** DDI or DID
:00 01 01 ,237         ** DDI or DID
'FXI$ +    FAX$,  238      ** DTMF
:03 ,239            ** DTMF
:00 01 01 ,240         ** DTMF
```

Inbound distribution is done with service FXI while scanning and user commands are based upon the uu99 file.

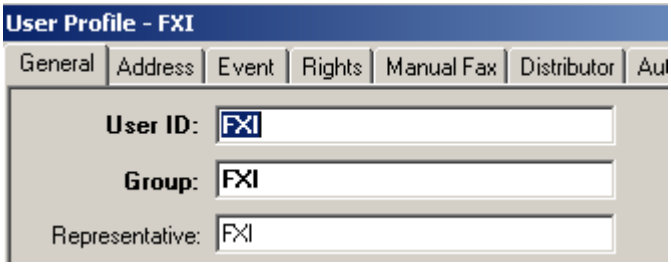
The service FXI has been defined, as per default, the following way:



1. **Create a user on the MEDIA server** which is identical to the service prefix of the service used for inbound distribution. In our example, we have used the "FXI:" for the FXI service.

   Note If you use another service prefix, such as FXO:, then this user must be created, that is, create a user which is identical to your service prefix on the MEDIA server.

   Therefore, start TCFW, login to the MEDIA server, open the user store, create a new user account, FXI with representative and Group also set to FXI and save that profile – **NO** other settings are required.



   This must be done due to following reasons:

   If a FAX is received on the MEDIA server, it must be routed to the correct TCOSS customer instance, in our case customer 01 or customer 02. This is done with the routing directory rr99 and a new syntax command called //CHECK. In case the user FXI does not exist on your system, the inbound FAX reception will show following error:

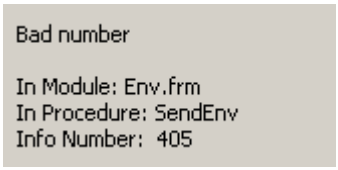
```
[TCOSS] 04:TAM ICmd 2//2CHECK,N=FXI$85<
```

```
[TCOSS] 04:TAM Resp 2405 bad number<
```

As the user FXI and therefore an address entry FXI is missing, the TAM part responses with 405 – bad number and the inbound call is aborted immediately!

You can easily test this behavior with TCFW and a new message with the following recipient information.

If you click the Send button you will face the following error message and sending is simply not possible:



This is due to KCS queue handling which states that every queue larger than 2 characters MUST exist as valid recipient within the address store on KCS. Therefore the user FXI must be created which additionally creates a recipient queue FXI.

2. **Create a rr99 routing directory** once the user is created and before you start the first reception. This directory defines to which customer instance the FAX has to be routed. In our example, the following rr99 file has been created:

```
**SENDMODES
**NORMALIZE
**ROUTE
FXI:85,FXI:customer01,   (wildcards are allowed)
FXI:86,FXI:customer01,   (wildcards are allowed)
FXI:87,FXI:customer02,   (wildcards are allowed)
FXI:88,FXI:customer02,   (wildcards are allowed)
**NODES
**INBOUND
,,FXI:~,,                fax inbound routing (commented out)
```

```
,,FXI:~,DIST:FXI~,      default fax inbound receiver (commented out)
```

FXI: settings within the ** INBOUND must be either deleted or commented out to prevent FAX routing problems. Additionally wildcards like '~' can be used within the **ROUTE section – you must NOT route each FAX number individually

Inbound number 85 and 86 are routed to customer 01, while numbers 87 and 88 are routed to customer 02.

Important The bold entries above (customer01 and customer02 MUST be identical to the registry values CustomerID on the storage server.

Registry entry for TCOSS01

```
HKEY_LOCAL_MACHINE\SOFTWARE\Topcall\TCOSS01\"CustomerID"="customer01"
```

Registry entry for TCOSS02

```
HKEY_LOCAL_MACHINE\SOFTWARE\Topcall\TCOSS02\"CustomerID"="customer02"
```

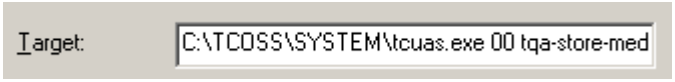
Note Storage Server customer ID must be identical to destination address string within rr99 **ROUTE entry on MEDIA server.

3. Start your first reception attempt to reach Storage server 01 or customer 01 with MSN information 85. The inbound command is generated from the FAX module as displayed below:

```
[TCOSS] 04:TAM ICmd 2//2CHECK,N=FXI$85<
[TCOSS] 04:TAM Resp 2105 TCTECH  : <
[TCOSS] 04:TAM ICmd 2//2LOGON,MODE=1,OR=FAX<
[TCOSS] 04:TAM Resp 2100 OK<
```

The remote FAX channel on the MEDIA sends the //2CHECK parameter to its counterpart remote FAX channel on the correct storage server and receives back the user ID which has assigned the MSN information 85, in our case TCTECH.

4. Whether the recipient is on storage server 01 (and not on storage server 02) is not displayed within the trace above, as it is a remote to remote FAX channel communication. To see the customer which would receive the FAX, start the TCUAS channel on the Media Server using the following options:



Remember that the TCUAS channel on the MEDIA server is assigned to slot 00.

5. After TCUAS has been started up, type in the following command:

```
//2CHECK,N=FXI$85
```

```
105 FXI     :customer01
```

You get another response although the same //CHECK command has been used. This is due to the fact that the TCUAS is a LOCAL channel while the Fax is a REMOTE channel.

So, by using the TCUAS ..command on the MEDIA server you will see to which TCOSS customer the call is routed, while the TCOSS trace shows the response from the STORAGE server whether a correct user ID has been found.

Note TCUAS is a LOCAL channel while FAX is a REMOTE channel on the MEDIA server.
With that knowledge you can do a “two step” verification.

a. the customer found correctly and

b. the user account on the customer instance found correctly

Make these tests to your advantage while working with an ASP model.

You can serve up to 20 TCOSS instances and therefore 20 different customers where rr99 routing might be a complicated process. Therefore do each task step by step.

6. We have now successfully finished the reception between MEDIA server and STORAGE server 01. To complete our tests we will additionally test the reception on the storage server 02.
7. Therefore, we have already created a user id, USER B, on storage server 02. This user has assigned MSN number 87 in its KCS user profile.

Active	No address no.	Service	Number:
X	1	TOPCALL	USER B,
	2	FXI	87,

8. The rr99 file has been set up and address 87 is routed to customer 02. To verify this, do the following:

   a. Open the TCUAS channel again and connect to the MEDIA server and type in the following command:

   ```
   //2CHECK,N=FXI$87
   105 FXI     :customer02
   ```

   So the first test is ok, customer 02 will get the call.

   b. Send an incoming FAX message to the MEDIA server with MSN information 87. The trace will show the following result:

   ```
   [TCOSS] 04:TAM ICmd 2//2CHECK,N=FXI$87<
   [TCOSS] 04:TAM Resp 2105 USER B  : <
   [TCOSS] 04:TAM ICmd 2//2LOGON,MODE=1,OR=FAX<
   [TCOSS] 04:TAM Resp 2100 OK<
   ```

   The remote Fax channel is already connected to the storage server 02 which sends back the information that USER B will receive the message.

   Also the second customer instance is working with the FAX reception.

   Now we know that the MEDIA server and both STORAGE server are working with reception.

Chapter 5

The Fax Scanning with an ASP System

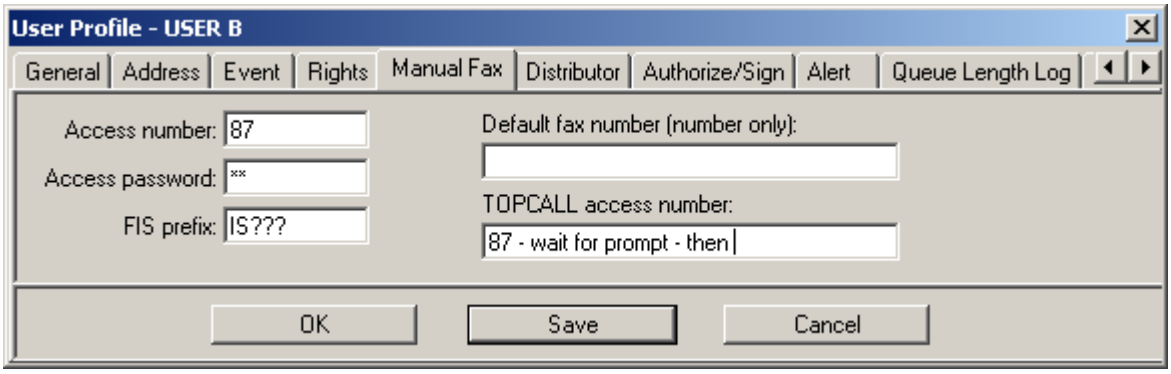
The FAX scanning only works with the system file uu99 in combination with an ASP KCS server (only via the uu99 file it is possible to set a “user to customer” relationship).

Therefore the config line 235 (DDI and DID) and 238 (DTMF) position 6…9 of all MEDIA servers remote FAX channels must be set to a + on position 6. The + defines the prefix for the FAX command which is used with 8xxxx commands. The + defines that the user ID and password information should be read from system file uu99.

```
'FXI$ +    FAX$,  235      ** DDI or DID
'FXI$ +    FAX$,  238      ** DTMF
```

As we do not have an ISDN line with DDI information, the following tests have been performed with an ISDN PTMP line with MSN digits and DTMF prompt enabled. The USER B with MSN information 87 located on TCOSS STORAGE server 02 wants to scan a FAX.

1. Login with TCFW to that STORAGE server 02 and modify the section “manual FAX” from USER B as displayed below.



2. Save the user profile and exit the user profile window.
3. Click yes to update KCS system files. This will create the following file Auu99 with the system folder of the STORAGE server 02

```
*
87\87\USER B:\\USER B:\\FAX$\2200\USER B:\F:IS???
```

4. Highlight the complete line displayed above and copy it to the clipboard with <ctrl><c>.
5. Start another instance of TCFW and login with TCTECH to the **MEDIA** server.
6. Open the system folder and open the file Auu99.

7. Paste the information from the clipboard with <ctrl><v> **in front of the asterisk** (manual section) into the uu99 file as displayed below:

```
87\87\USER B:\\USER B:\\FAX$\2200\USER B:\F:IS???
*
```

8. Additionally add the following manually at the end of that entry:

```
87\87\USER B:\\USER B:\\FAX$\2200\USER B:\F:IS???\\YY:customer02
*
```

The uu99 file has been extended with a so called “ASP customer information field”. This field is marked bold above. It contains a one or two digit channel definition which does not exist (be sure to use a letter combination which does not fit to any valid channel on that system) and a valid customer information.

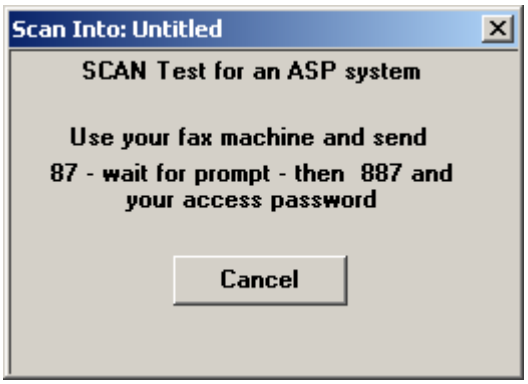
Important The bold entry above (customer02) MUST be identical to the registry value CustomerID on the storage server.

Registry entry for TCOSS02:

```
HKEY_LOCAL_MACHINE\SOFTWARE\Topcall\TCOSS02\"CustomerID"="customer02"
```

9. The same rule is valid for a user on STORAGE server 01 but then all definitions must be done with customer01.

10. Now login with USER B via TCFW to the STORAGE server 02, open a new message and click the SCAN button. A message window pops up with the following information.



11. Follow the instructions and the FAX trace / TAMTUM trace on the MEDIA server shows the following:

```
[TCOSS] N3/T4CB 2.00=04:MOD RxGain1 1
[TCOSS] N3/T4CB .001=04:MOD sound 700, 60         ** DTMF prompt
[TCOSS] N3/T4CB .605=04:MOD sound 880, 30         ** DTMF prompt
[TCOSS] N3/T4CB 1.78=04:MOD rx_dtmf res=1, *pch=8   ** digits for scan
[TCOSS] N3/T4CB 1.32=04:MOD rx_dtmf res=1, *pch=8   ** digits for scan
[TCOSS] N3/T4CB .372=04:MOD rx_dtmf res=1, *pch=7   ** digits for scan
[TCOSS] N3/T4CB .771=04:MOD rx_dtmf res=1, *pch=8   ** digits for scan
[TCOSS] N3/T4CB .579=04:MOD rx_dtmf res=1, *pch=7   ** digits for scan
[TCOSS] N3/T4CB 1.47=04:MOD rx_dtmf res=1, *pch=#   ** end
[TCOSS] 04:TAM  ICmd 2//2USER,RC=+8787<
[TCOSS] 04:TAM  Resp 2105 87\87\USER B:\+4318635373542\USER B:\\FAX$\2200\USER
                    B:\F:IS???\\YY:customer02 <
[TCOSS] 04:TAM  ICmd 2//2CHECK,N=YY:customer02<
[TCOSS] 04:TAM  Resp 2105 YY      :customer02 <
[TCOSS] 04:TAM  ICmd 2//2LOGON,MODE=1,OR=FAX<
```

```
[TCOSS] 04:TAM  Resp 2100 OK<
```

The above sequence shows a successful SCAN attempt from a user located on STORAGE server 02.

Note

- Scanning within an ASP system is only possible with the uu99 file
- Although the user is defined on the STORAGE server, the uu99 file must be manually maintained on the MEDIA server
- The entries must be applied into the manual section of the uu99 file to prevent loss of information
- A so called “dummy” channel, in the example above YY: must be used for the //2CHECK command

12. As the user on STORAGE server 01 should also have the ability to scan, the uu99 file on the MEDIA server has been extended:

```
86\86\USER A:\\USER A:\\FAX$\2200\USER A:\F:IS???\\YY:customer01
87\87\USER B:\\USER B:\\FAX$\2200\USER B:\F:IS???\\YY:customer02
*
```

Disadvantage: This must be done for each user manually which is an administrative overhead.

Chapter 6

Routing Commands with User ID / Password Match

The goal should be that manual FAX machines are used to send documents to the appropriate STORAGE server and KCS should be responsible in sending them to the final destination number with all possible retries.

For this purpose the uu99 file form the MEDIA server can be used without additional modifications. Only the command used from the FAX machine to send to KCS is different.

In our first example the user USER B, located on the STORAGE server 02, customer02 sends a FAX to KCS. This is done the following way.

```
<access number> wait for prompt 8<userID><PW><routing 0..5><FAX dest>
```

The TCOSS FAX / TAMTUM trace shows the following sequence:

```
[TCOSS] N3/T4CB .001=04:MOD sound 700, 60          ** DTMF prompt
[TCOSS] N3/T4CB .606=04:MOD sound 880, 30          ** DTMF prompt
[TCOSS] N3/T4CB .794=04:MOD rx_dtmf res=1, *pch=8      ** Routing command
[TCOSS] N3/T4CB .585=04:MOD rx_dtmf res=1, *pch=8
[TCOSS] N3/T4CB .285=04:MOD rx_dtmf res=1, *pch=7
[TCOSS] N3/T4CB .792=04:MOD rx_dtmf res=1, *pch=8
[TCOSS] N3/T4CB .807=04:MOD rx_dtmf res=1, *pch=7
[TCOSS] N3/T4CB .908=04:MOD rx_dtmf res=1, *pch=5
[TCOSS] N3/T4CB .995=04:MOD rx_dtmf res=1, *pch=8
[TCOSS] N3/T4CB .596=04:MOD rx_dtmf res=1, *pch=6
[TCOSS] N3/T4CB .562=04:MOD rx_dtmf res=1, *pch=3
[TCOSS] N3/T4CB .716=04:MOD rx_dtmf res=1, *pch=5
[TCOSS] N3/T4CB .759=04:MOD rx_dtmf res=1, *pch=3
[TCOSS] N3/T4CB .949=04:MOD rx_dtmf res=1, *pch=7
[TCOSS] N3/T4CB .491=04:MOD rx_dtmf res=1, *pch=3
[TCOSS] N3/T4CB .716=04:MOD rx_dtmf res=1, *pch=5
[TCOSS] N3/T4CB .771=04:MOD rx_dtmf res=1, *pch=4
[TCOSS] N3/T4CB .540=04:MOD rx_dtmf res=1, *pch=2
[TCOSS] N3/T4CB .864=04:MOD rx_dtmf res=1, *pch=#      ** End of command
[TCOSS] 04:TAM ICmd 2//2USER,RC=+878758635373542<
[TCOSS] 04:TAM Resp 2105 87\87\USER B:\\USER B:\\FAX$\1540\USER
 B:\F:IS???\\YY:customer02 <
[TCOSS] 04:TAM ICmd 2//2CHECK,N=YY:customer02<
[TCOSS] 04:TAM Resp 2105 YY      :customer02 <
[TCOSS] 04:TAM ICmd 2//2LOGON,MODE=1,OR=FAX<
[TCOSS] 04:TAM Resp 2100 OK<
[TCOSS] 04:TAM ICmd 2//2CHECK,N=YY:customer02<
[TCOSS] 04:TAM Resp 2105 YY      :customer02 <
[TCOSS] 04:TAM ICmd 2//1LOGON,TYP=1,AUTOR=+4318635373542          <
[TCOSS] 04:TAM Resp 2101 ATF0006     020612 153736 OK<
[TCOSS] 04:TAM ICmd 2//2S,N=FAX$8635373542,OR=USER B:,TE= 3,P=0,T=1540<
[TCOSS] 04:TAM Resp 2100 OK<
```

Within the Outbox of USER B located on the STORAGE server 02, the following information can be found:

...From Continued	Normalized Sender		Message Name	Retrie...	Send Time	Priority	Error
USER B:	USER B:		ATF0006	0	12.06.2002 15:40	Low	

This correlates correctly with the trace above and also the routing commands do work fine. Of course the same tests must be done with user USER A located on the STORAGE server 01.

If you take a closer look at the outbox, you will find out that although the user has a cost center defined in its user profile, the field is left empty in the outbox for the routed send orders.

Response	F.	Send Time	Cost Center
+4318635373542	0.	12.06.2002 15:40	

This is due to the fact that dot dot commands cannot access the TCFW user profile (TCSI based) and therefore cannot use the settings from the users. To workaround this problem again a manual change within the uu99 file on the MEDIA server for each user is required. Therefore open the uu99 file and insert the cost center definition in front of the ASP-customer-information field.

Change all entries from

```
87\87\USER B:\\USER B:\\FAX$\0915\USER B:\F:IS???\ \YY:customer02
*
```

to

```
87\87\USER B:\\USER B:\\FAX$\0915\USER B:\F:IS???\COSTCENTER\YY:customer02
*
```

COSTCENTER is a term which has been used for our example you can use any string you like up to 12 characters long.

On the next page you will see the changed dot dot sequence as it now contains the cost center definition for the routed FAX send orders.

Again the USER B on STORAGE server 02 uses a FAX routing command.

```
[TCOSS] 04:TAM ICmd 2//2USER,RC=+8787586353735 42<
[TCOSS] 04:TAM Resp 2105 87\87\USER B:\\USER B:\\FAX$\0915\USER
 B:\F:IS???\COSTCENTER\YY:customer02 <
[TCOSS] 04:TAM ICmd 2//2CHECK,N=YY:customer02<
[TCOSS] 04:TAM Resp 2105 YY      :customer02 <
[TCOSS] 04:TAM ICmd 2//2LOGON,MODE=1,OR=FAX<
[TCOSS] 04:TAM Resp 2100 OK<
[TCOSS] 04:TAM ICmd 2//2CHECK,N=YY:customer02<
[TCOSS] 04:TAM Resp 2105 YY      :customer02 <
[TCOSS] 04:TAM ICmd 2//1LOGON,TYP=1,AUTOR=+4318635373542
[TCOSS] 04:TAM Resp 2101 ATF0007     020613 091008 OK<
[TCOSS] 04:TAM ICmd 2//2S,N=FAX$8635373542,OR=USER B:,CC=COSTCENTER,TE= 3,P=0,T=0915
[TCOSS] 04:TAM Resp 2100 OK<
```

Now the cost center has been recognized correctly and is also part of the TCFW outbox.

Response	File Size	Send Time	Cost Center
+4318635373542	000017575	13.06.2002 09:16	COSTCENTER

As last test USER A on STORAGE server 01 with cost centre MARKETING uses the FAX routing command, therefore the uu99 file on the MEDIA server has been extended to:

```
86\86\USER A:\\USER A:\\FAX$\0935\USER A:\F:IS???\MARKETING\YY:customer01
87\87\USER B:\\USER B:\\FAX$\0915\USER B:\F:IS???\COSTCENTER\YY:customer02
*
```

```
[TCOSS] 04:TAM ICmd 2//2USER,RC=+868658635373542<
[TCOSS] 04:TAM Resp 2105 86\86\USER A:\\USER A:\\FAX$\0935\USER
 A:\F:IS???\MARKETING\YY:customer01 <
[TCOSS] 04:TAM ICmd 2//2CHECK,N=YY:customer01<
[TCOSS] 04:TAM Resp 2105 YY      :customer01 <
[TCOSS] 04:TAM ICmd 2//2LOGON,MODE=1,OR=FAX<
[TCOSS] 04:TAM Resp 2100 OK<
[TCOSS] 04:TAM ICmd 2//2CHECK,N=YY:customer01<
[TCOSS] 04:TAM Resp 2105 YY      :customer01 <
[TCOSS] 04:TAM ICmd 2//1LOGON,TYP=1,AUTOR=+4318635373542
[TCOSS] 04:TAM Resp 2101 ATF0008     020613 093213 OK<
[TCOSS] 04:TAM ICmd 2//2S,N=FAX$8635373542,OR=USER A:,CC=MARKETING,TE= 3,P=0,T=0935
[TCOSS] 04:TAM Resp 2100 OK<
```

File Name	Created At		M..	R..	C..	M.	M...	Suspe...	Cost Center
ATF0008	13.06.2002 09:32	1	0...	1...	0...	T..	0...	No	MARKETING

Tip COST Center definition is possible but requires manual changes within the uu99 system file.

Chapter 7

Routing Commands with TSI Match

TSI match is called “Transmitted Subscriber Identification” match. With this solution, KCS checks the TSI from the Sender FAX machine and compares the entries with matches found within the system file uu99 located on the MEDIA server.

This is a more sophisticated solution than user ID/password match and offers higher security.

The goal with TSI match instead of user ID/password match is that only allowed manual FAX machines can be used to send documents to the appropriate STORAGE server.

Special Tip: For testing, a FAX modem trace has been setup with following settings:

Config line 232 set to :02 02 02 02

Config line 242 set to :00 00 00 03 (remaining entries 00).

This shows the FAX communication more detailed.

For this solution, a TCOSS config change is required as we want to prevent the user ID/password check and allow the TSI based check. Therefore change the config lines 237 and 240 of all FAX channels on the MEDIA server to:

```
:00 01 01 ,237      ** for DID or DDI
:00 01 01 ,240      ** for DTMF routing
```

The first position disables the user ID/password check while the second position enables the TSI based check.

Now we must again change the uu99 system file on the MEDIA server as we must define the “allowed” sender FAX machines

For this purpose we change the uu99 system file

from

```
87\87\USER B:\\USER B:\\FAX$\1015\USER B:\F:IS???\COSTCENTER\YY:customer02
*
```

to

```
87\87\USER B:\+4318635373542\USER B:\\FAX$\1015\USER B:\F:IS???\COSTCENTER\
 YY:customer02
*
```

We added an allowed TSI (without blanks in-between) into the uu99 system file for user B located on STORAGE server 02. This will immediately show us the restriction of the TSI match as the uu99 system

file is scanned from top to bottom for the first exact match. The first match wins and always gets the document.

USER A on STORAGE server 01 does not get a FAX routed document in its outbox with the following uu99 file on the MEDIA server:

```
87\87\USER B:\+4318635373542\USER B:\\FAX$\1015\USER B:\F:IS???\COSTCENTER\
 YY:customer02
86\86\USER A:\+4318635373542\USER A:\\FAX$\0935\USER A:\F:IS???\MARKETING\
 YY:customer01
*
```

Always USER B will receive the document. Therefore, instead of using user accounts in the solution, you must use special accounts per STORAGE server.

Also one FAX machine cannot be used for different customer instances due to that limitation. For this purpose, we have created an user account STORE01 on the STORAGE server 01 and a user account STORE02 on the STORAGE server 02. The uu99 file has been adapted the following way:

```
\\STORE01:\+4318635373542\STORE01:\\FAX$\1035\STORE01:\F:IS???\CC01\YY:
customer01
\\STORE02:\+431863537044\STORE02:\\FAX$\2200\STORE02:\F:IS???\CC02\YY:
customer02
87\87\USER B:\\USER B:\\FAX$\1015\USER B:\F:IS???\COSTCENTER\YY:customer02
86\86\USER A:\\USER A:\\FAX$\0935\USER A:\F:IS???\MARKETING\YY:customer01
*
```

You see that both entries, STORE01 and STORE02, do not have a user ID/password assigned but they have an “allowed” TSI defined. All Faxes from FAX 735 42 are routed to STORE01 while all Faxes from 70 40 are routed to STORE02.

While sending from this manual FAX machine to KCS, the enabled modem trace shows us the exact TSI from the sender FAX machine (only in cases where you don’t know the TSI necessary). Simply search for the following line within the TCOSS trace:

```
[TCOSS] N3/T4CA 1.60=04:MOD-Rx ok(23) = tTSI Fax: +43 1 86353 73542
```

Ignore the blanks as TCOSS removes them.

So while sending from the FAX machine to KCS, the following happens:

```
[TCOSS] N3/T4CB .001=04:MOD sound 700, 60          ** DTMF prompt
[TCOSS] N3/T4CB .606=04:MOD sound 880, 30          ** DTMF prompt
[TCOSS] N3/T4CB 1.22=04:MOD rx_dtmf res=1, *pch=5   ** start of command
[TCOSS] N3/T4CB .609=04:MOD rx_dtmf res=1, *pch=8
[TCOSS] N3/T4CB .497=04:MOD rx_dtmf res=1, *pch=6
[TCOSS] N3/T4CB .632=04:MOD rx_dtmf res=1, *pch=3
[TCOSS] N3/T4CB .506=04:MOD rx_dtmf res=1, *pch=5
[TCOSS] N3/T4CB .373=04:MOD rx_dtmf res=1, *pch=3
[TCOSS] N3/T4CB .558=04:MOD rx_dtmf res=1, *pch=7
[TCOSS] N3/T4CB .412=04:MOD rx_dtmf res=1, *pch=3
[TCOSS] N3/T4CB .346=04:MOD rx_dtmf res=1, *pch=5
[TCOSS] N3/T4CB .441=04:MOD rx_dtmf res=1, *pch=4
[TCOSS] N3/T4CB .470=04:MOD rx_dtmf res=1, *pch=2
[TCOSS] N3/T4CB .734=04:MOD rx_dtmf res=1, *pch=#   ** end of command
[TCOSS] 04:TAM ICmd 2//2LOGON,MODE=1,OR=FAX<
[TCOSS] 04:TAM Resp 2100 OK<
[TCOSS] 04:TAM ICmd 2..2USER,RC=*\*\*\+4318635373542\<
[TCOSS] 04:TAM Resp 2105 \\STORE01:\+4318635373542\STORE01:\\FAX$\1035\STORE01:\
 F:IS???\CC01\YY:customer01 <
[TCOSS] 04:TAM ICmd 2//2CHECK,N=YY:customer01<
```

```
[TCOSS] 04:TAM Resp 2105 YY      :customer01 <
[TCOSS] 04:TAM ICmd 2//1LOGON,TYP=1,AUTOR=+4318635373542          <
[TCOSS] 04:TAM Resp 2101 ATF0009     020613 102718 OK<
[TCOSS] 04:TAM ICmd 2//2S,N=FAX$8635373542,OR=STORE01:,CC=CC01,TE= 3,P=0,T=1035<
[TCOSS] 04:TAM Resp 2100 OK<
```

The important command is the ..2USER command (highlighted above):

```
..2USER,RC=*\*\*\+4318635373542\
```

The first three positions, in this command, are marked with an asterisk which denotes wildcard and the fourth position is the TSI which MUST match. This is basically the only difference between TSI based routing or user ID/password based routing.

The TCFW outbox on STORAGE server 01 show the following correct status view:

From:	Orig.Group:	...From Continued	Normalized Sender	Message Name
STORE01	STORE01	STORE01:	STORE01:	ATF0009

Nevertheless, below an attempt from the other FAX machine, 7040, to STORAGE server 02.

Modem trace shows us the sender TSI:

```
[TCOSS] N3/T4CA 1.62=04:MOD-Rx ok(23) = tTSI Fax:     +43 1 86353 7044
[TCOSS] 04:TAM ICmd 2..2USER,RC=*\*\*\+431863537044\<
[TCOSS] 04:TAM Resp 2105 \\STORE02:\+431863537044\STORE02:\\FAX$\2200\
 STORE02:\F:IS???\CC02\YY:customer02 <
[TCOSS] 04:TAM ICmd 2//2CHECK,N=YY:customer02<
[TCOSS] 04:TAM Resp 2105 YY      :customer02 <
[TCOSS] 04:TAM ICmd 2//1LOGON,TYP=1,AUTOR=+431863537044           <
[TCOSS] 04:TAM Resp 2101 ATF0009     020613 111134 OK<
[TCOSS] 04:TAM ICmd 2//2S,N=FAX$8635373542,OR=STORE02:,CC=CC02,TE= 3,P=0,T=2200<
[TCOSS] 04:TAM Resp 2100 OK<
```

The TCFW outbox on STORAGE server 02 shows the following correct status view:

From:	Normalized Sender	Message Name	Retrie...	Send Time
STORE02	STORE02:	ATF0009	9	13.06.2002 22:00

Special Tip: While working with TSI based routing do NEVER set third position of FAX config line 143 on the MEDIA server to 01 (shows enhanced transmission parameters).

If you have this position enabled, the following will happen:

```
[TCOSS] 04:TAM   ICmd 2..2USER,RC=*\*\*\+4318635373542      N30\<
[TCOSS] 04:TAM Resp 2319 no record<
```

With this solution TCOSS shows at the end of the author field (last three positions) the transmission parameters. This author field is used for TSI based routing but the transmission parameters prevent an exact match. Therefore the FAX transmission is aborted immediately.

Chapter 8

Mailbox Command 71 – Show User Mailbox

This command can be used to access the KCS server and to send the content of your own user mailbox stored on TCOSS to any FAX destination number worldwide, wherever you are. It shows you all open send orders but not already terminated send orders.

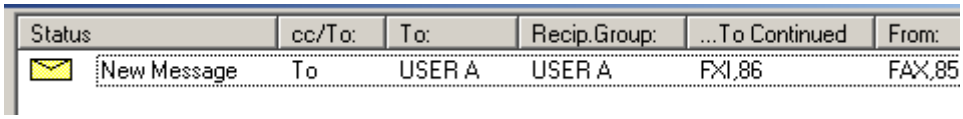
The dial procedure to get an overview, in our example with DTMF prompt, would be:

```
<access number><DTMF prompt>8<userID><password>71<routing 0..5><FAX dest.>
```

or alternatively with session reversal

```
<access number><DTMF prompt>8<userID><password>71<routing 0..5>
[TCOSS] N3/T4CB .001=04:MOD sound 700, 60      ** DTMF prompt
[TCOSS] N3/T4CB .605=04:MOD sound 880, 30      ** DTMF prompt
[TCOSS] N3/T4CB .955=04:MOD rx_dtmf res=1, *pch=8   ** start of command
[TCOSS] N3/T4CB .884=04:MOD rx_dtmf res=1, *pch=8
[TCOSS] N3/T4CB .478=04:MOD rx_dtmf res=1, *pch=6
[TCOSS] N3/T4CB .521=04:MOD rx_dtmf res=1, *pch=8
[TCOSS] N3/T4CB .548=04:MOD rx_dtmf res=1, *pch=6
[TCOSS] N3/T4CB .888=04:MOD rx_dtmf res=1, *pch=7
[TCOSS] N3/T4CB .521=04:MOD rx_dtmf res=1, *pch=1
[TCOSS] N3/T4CB 1.02=04:MOD rx_dtmf res=1, *pch=5
[TCOSS] N3/T4CB .923=04:MOD rx_dtmf res=1, *pch=8
[TCOSS] N3/T4CB .429=04:MOD rx_dtmf res=1, *pch=6
[TCOSS] N3/T4CB .197=04:MOD rx_dtmf res=1, *pch=3
[TCOSS] N3/T4CB .878=04:MOD rx_dtmf res=1, *pch=5
[TCOSS] N3/T4CB .753=04:MOD rx_dtmf res=1, *pch=3
[TCOSS] N3/T4CB 1.03=04:MOD rx_dtmf res=1, *pch=7
[TCOSS] N3/T4CB .451=04:MOD rx_dtmf res=1, *pch=3
[TCOSS] N3/T4CB .517=04:MOD rx_dtmf res=1, *pch=5
[TCOSS] N3/T4CB .496=04:MOD rx_dtmf res=1, *pch=4
[TCOSS] N3/T4CB .389=04:MOD rx_dtmf res=1, *pch=2
[TCOSS] N3/T4CB 1.59=04:MOD rx_dtmf res=1, *pch=#   ** end of command
[TCOSS] 04:TAM ICmd 2//2USER,RC=+86867158635373542<
[TCOSS] 04:TAM Resp 2105 86\86\USER A:\\USER A:\\FAX$\1145\USER
 A:\F:IS???\MARKETING\YY:customer01 <
[TCOSS] 04:TAM ICmd 2//2CHECK,N=YY:customer01<
[TCOSS] 04:TAM Resp 2105 YY      :customer01 <
 [TCOSS] 04:TAM ICmd 2//2C,M=3,C=USER A,N=FAX$8635373542,OR=USER A:,CC=MARKETING,
  TE= 3,P=0,T=1145<
[TCOSS] 04:TAM Resp 2100 OK<
[TCOSS] 04:TAM ICmd 2//2CHECK,N=YY:customer01<
[TCOSS] 04:TAM Resp 2105 YY      :customer01 <
[TCOSS] 04:TAM ICmd 2//2LOGON,MODE=1,OR=FAX<
[TCOSS] 04:TAM Resp 2100 OK<
[TCOSS] 04:TAM ICmd 2//1LOGOFF,FC=X?,ENDE=5<
```

The USER A on STORAGE server 01 has one open document in its inbox. TCOSS scans this inbox and shows all documents with an actual send order for this user.



Status	cc/To:	To:	Recip.Group:	...To Continued	From:
New Message	To	USER A	USER A	FXI,86	FAX,85

If any document has been found TCOSS generates a send order to the defined FAX destination number. The filename is the A+INHALT (pseudo document).

You will find this send order in the outbox of the correlating user account.

To:	..	From:	Orig.Group:	Normalize...	S...	Message Name
FAX,8635373542	F.	USER A	USER A	USER A:		A+INHALT

Disadvantage of this method is the presented form of the documents. It will look like displayed below:

```
<Date><Time>
REFERENCE                       DATE    TIME
A:TF0007      12311  +43-1-86353-0    -001  <date><time>
 USER A:                       <date><time>  US9
```

No Header line is used, the old style KCS FAX font is used, no graphic presentation – the form is completely outdated.

Chapter 9

Mailbox Command 72 – Empty User Mailbox

This command can be used to access the KCS server and to send all documents from your own user mailbox stored on TCOSS to any FAX destination number worldwide, wherever you are. It sends you all “not terminated” documents to the desired destination number.

The dial procedure to get an overview, in our example with DTMF prompt, would be:

In the following example we want to access the inbox of USER B and send the content of all un-terminated documents to our destination FAX number.

The INBOX of USER B on STORAGE server 02 shows the following information:

Status	cc/To:	To:	Recip.Group:	...To Co...	From:	.....	Orig.G...
Touched	To	USER B	USER B	USER B...	TCT...	T...	TCTE...
New Message	To	USER B	USER B	USER B...	TCT...	T...	TCTE...
New Message	To	USER B	USER B	USER B...	TCT...	T...	TCTE...
Completed	To	USER B	USER B	FXI,87	FAX,...	F	

The dial procedure to get these documents, in our example with DTMF prompt, would be:

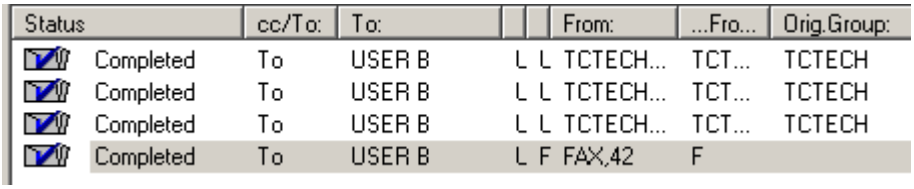
```
<access number><DTMF prompt>8<userID><password>72<routing 0..5><FAX dest.>
No session reversal possible!
```

Using session reversal here will end in an error message “400 bad command syntax” due to re-routing problems.

```
[TCOSS] 08:TAM ICmd 2//2USER,RC=+1111720<
[TCOSS] N3/T27 001=Redirecting Number: Converted (first)  =>  (last)  =>
[TCOSS] 08:TAM Resp 2105 11\11\USER A:\\USER A:\\FAX$\2200\USER A:\F:IS???\TQA
\YY:SONERA 02 <
TCOSS] 08:TAM  ICmd 2//2CHECK,N=YY:SONERA 02<
[TCOSS] 08:TAM Resp 2105 YY      :SONERA 02 <
[TCOSS] 08:TAM ICmd 2//2RR,C=USER A<
[TCOSS] 08:TAM Resp 2400 bad command syntax<
[TCOSS] 08:TAM Esc <
The command sent from the FAX machine or any telephone to KCS would be handled as
 displayed in the following trace
[TCOSS] N3/T4CB .001=04:MOD sound 700, 60  ** DTMF prompt
[TCOSS] N3/T4CB .607=04:MOD sound 880, 30  ** DTMF prompt
[TCOSS] N3/T4CB .950=04:MOD rx_dtmf res=1, *pch=8 ** command start
[TCOSS] N3/T4CB .564=04:MOD rx_dtmf res=1, *pch=8
[TCOSS] N3/T4CB .418=04:MOD rx_dtmf res=1, *pch=7
[TCOSS] N3/T4CB .612=04:MOD rx_dtmf res=1, *pch=8
[TCOSS] N3/T4CB .697=04:MOD rx_dtmf res=1, *pch=7
[TCOSS] N3/T4CB 1.60=04:MOD rx_dtmf res=1, *pch=7
[TCOSS] N3/T4CB .542=04:MOD rx_dtmf res=1, *pch=2
[TCOSS] N3/T4CB .919=04:MOD rx_dtmf res=1, *pch=5
[TCOSS] N3/T4CB .923=04:MOD rx_dtmf res=1, *pch=8
```

```
[TCOSS] N3/T4CB .232=04:MOD rx_dtmf res=1, *pch=6
[TCOSS] N3/T4CB .389=04:MOD rx_dtmf res=1, *pch=3
[TCOSS] N3/T4CB .646=04:MOD rx_dtmf res=1, *pch=5
[TCOSS] N3/T4CB .098=04:MOD rx_dtmf res=1, *pch=3
[TCOSS] N3/T4CB .758=04:MOD rx_dtmf res=1, *pch=7
[TCOSS] N3/T4CB .411=04:MOD rx_dtmf res=1, *pch=3
[TCOSS] N3/T4CB .437=04:MOD rx_dtmf res=1, *pch=5
[TCOSS] N3/T4CB .570=04:MOD rx_dtmf res=1, *pch=4
[TCOSS] N3/T4CB .400=04:MOD rx_dtmf res=1, *pch=2
[TCOSS] N3/T4CB .884=04:MOD rx_dtmf res=1, *pch=# ** command end
[TCOSS] 04:TAM ICmd 2//2USER,RC=+87877258635373542<
[TCOSS] 04:TAM Resp 2105 87\87\USER B:\\USER B:\\FAX$\1225\USER B:\F:IS???\
 COSTCENTER\YY:customer02 <
[TCOSS] 04:TAM ICmd 2//2CHECK,N=YY:customer02<
[TCOSS] 04:TAM Resp 2105 YY      :customer02 <
[TCOSS] 04:TAM ICmd 2//2RR,C=USER B,N=FAX$8635373542,OR=USER B:,CC=COSTCENTER,
   TE= 3,P=0,T=1225<
[TCOSS] 04:TAM Resp 2100 OK<
```

TCOSS verifies the user and creates a re-route command to send all “un-terminated” messages to the destination FAX number defined within the 72xx command. After you have received all open documents from your inbox, the status of these messages is changed to “completed”, see below:



Status	cc/To:	To:			From:	...Fro...	Orig.Group:
Completed	To	USER B	L	L	TCTECH...	TCT...	TCTECH
Completed	To	USER B	L	L	TCTECH...	TCT...	TCTECH
Completed	To	USER B	L	L	TCTECH...	TCT...	TCTECH
Completed	To	USER B	L	F	FAX,42	F	

Note The re-route command will generate separate send orders, in our example three send orders to the same FAX number. Therefore be sure to enable the “locking of all send commands to equal number", FAX config line 11 set to 01, on the STORAGE server.

Session reversal of command 72 is not possible within an ASP environment

Chapter 10

Mailbox Command 73 – Get FIS Document

This command can be used to access the KCS server and to retrieve any document which has been stored within a special folder called FIS – Fax Information Store folder. As letters are not recognized via FAX commands, the document prefix is defined within the uu99 located on the MEDIA Server, see below:

```
\\STORE01:\+4318635373542\STORE01:\\FAX$\1035\STORE01:\F:IS???\CC01\YY:
customer01
\\STORE02:\+431863537044\STORE02:\\FAX$\2200\STORE02:\F:IS???\CC02\YY: customer02
87\87\USER B:\\USER B:\\FAX$\1225\USER B:\F:IS???\COSTCENTER\YY:customer02
86\86\USER A:\\USER A:\\FAX$\1145\USER A:\F:IS???\MARKETING\YY:customer01
*
```

Highlighted above the FIS folder specification, F: the drive location and IS the document prefix. The three ??? are used as placeholder for any valid document number from 000 up to 999. If you need more documents, simply add an additional question mark which would offer a range from 0000 up to 9999.

Note The FIS folder from the STORAGE server is used and NOT from the MEDIA server!

The dial procedure to get these documents, in our example with DTMF prompt, would be:

```
<access number><DTMF prompt>8<userID><password>73<doc ID><routing 0..5>
<FAX dest>
```

or alternatively with session reversal

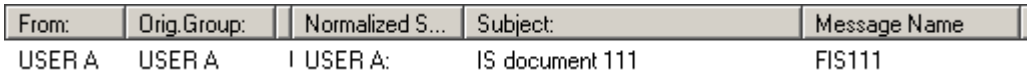
```
<access number><DTMF prompt>8<userID><password>73<doc ID><routing 0..5>
```

In our next example, USER A located on STORAGE server 01 tries to download the FIS document IS111 located in the STORAGE server FIS folder

```
[TCOSS] N3/T4CB .001=04:MOD sound 700, 60   ** DTMF prompt
[TCOSS] N3/T4CB .606=04:MOD sound 880, 30   ** DTMF prompt
[TCOSS] N3/T4CB .878=04:MOD rx_dtmf res=1, *pch=8 ** command start
[TCOSS] N3/T4CB .606=04:MOD rx_dtmf res=1, *pch=8
[TCOSS] N3/T4CB .367=04:MOD rx_dtmf res=1, *pch=6
[TCOSS] N3/T4CB .397=04:MOD rx_dtmf res=1, *pch=8
[TCOSS] N3/T4CB .728=04:MOD rx_dtmf res=1, *pch=6
[TCOSS] N3/T4CB .940=04:MOD rx_dtmf res=1, *pch=7
[TCOSS] N3/T4CB .660=04:MOD rx_dtmf res=1, *pch=3
[TCOSS] N3/T4CB .847=04:MOD rx_dtmf res=1, *pch=1
[TCOSS] N3/T4CB .351=04:MOD rx_dtmf res=1, *pch=1
[TCOSS] N3/T4CB .370=04:MOD rx_dtmf res=1, *pch=1
[TCOSS] N3/T4CB .649=04:MOD rx_dtmf res=1, *pch=5
[TCOSS] N3/T4CB .206=04:MOD rx_dtmf res=1, *pch=8
[TCOSS] N3/T4CB .328=04:MOD rx_dtmf res=1, *pch=6
[TCOSS] N3/T4CB .379=04:MOD rx_dtmf res=1, *pch=3
[TCOSS] N3/T4CB .598=04:MOD rx_dtmf res=1, *pch=5
[TCOSS] N3/T4CB .334=04:MOD rx_dtmf res=1, *pch=3
[TCOSS] N3/T4CB .558=04:MOD rx_dtmf res=1, *pch=7
[TCOSS] N3/T4CB .400=04:MOD rx_dtmf res=1, *pch=3
[TCOSS] N3/T4CB .418=04:MOD rx_dtmf res=1, *pch=5
```

```
[TCOSS] N3/T4CB .599=04:MOD rx_dtmf res=1, *pch=4
[TCOSS] N3/T4CB .380=04:MOD rx_dtmf res=1, *pch=2
[TCOSS] N3/T4CB .884=04:MOD rx_dtmf res=1, *pch=# ** command end
[TCOSS] 04:TAM ICmd 2//2USER,RC=+868673111158635373542<
[TCOSS] 04:TAM Resp 2105 86\86\USER A:\\USER A:\\FAX$\1325\USER A:\F:IS???\
 MARKETING\YY:customer01 <
[TCOSS] 04:TAM ICmd 2//2CHECK,N=YY:customer01<
[TCOSS] 04:TAM Resp 2105 YY      :customer01 <
[TCOSS] 04:TAM ICmd 2//2S,R=F:IS111,N=FAX$8635373542,OR=USER A:,CC=MARKETING,
  TE= 3,P=0,T=1325<
[TCOSS] 04:TAM Resp 2100 OK<
[TCOSS] 04:TAM ICmd 2//2LOGON,MODE=1,OR=FAX<
[TCOSS] 04:TAM Resp 2100 OK<
```

TCOSS generates a simple send command to the destination number with the desired document ID. The send order will appear within the outbox of USER A as displayed below:



From:	Orig.Group:	Normalized S...	Subject:	Message Name
USER A	USER A	I USER A:	IS document 111	FIS111

Chapter 11

Conclusion

If you have worked your way through the manual and did all the tests and installation hints described here you are on the best way to be an experienced KCS technician. It might sound difficult and hard to understand at the beginning but the more you work with KCS and especially with an ASP system the better you will be.

Especially working with dot dot commands is highly recommended as all the commands are internally handled via this language.