



FoxInCloud

A-Z tutorial

Prepared for the 20TH VFP DevCon Germany, 11/2013

Requires FAA & FAS V2.0+

Agenda



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3	Publishing your Application on localhost	42
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Each session breaks down into episodes

Prerequisites



Download and install:

- FoxInCloud Adaptation Assistant (FAA)
- FoxInCloud Application Server (FAS)

Both FAA and FAS are available for free at:

<http://foxincloud.com/download.php>



FoxInCloud

A-Z tutorial, Session 1

Requires FAA & FAS V2.0+

Session 1

Understanding FoxInCloud

This session targets users who wish to see the big picture before starting hands-on experience...

it describes how FoxInCloud Application Server (FAS) operates your application on a Web server and interacts with the client browser.

Reproducing steps of this session requires setting break points at various locations of FAS source code (licensed users only).

Though you may follow the steps by browsing the coming slides and applying the steps on your own machine, you may get a better understanding by attending a FoxInCloud workshop or training session; please feel free to mail contact@foxincloud.com for workshops and training sessions to come.

FAS installs the files used in this session into `<VFP9>\Tools\AB\AW\Samples\FIC\FICtuto\`

Understanding FoxInCloud, Agenda



Episode	Subject	Slides
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FoxInCloud Architecture

Web server (IIS, Apache, ...):
Hosts Web site (i.e.
www.mysite.com)

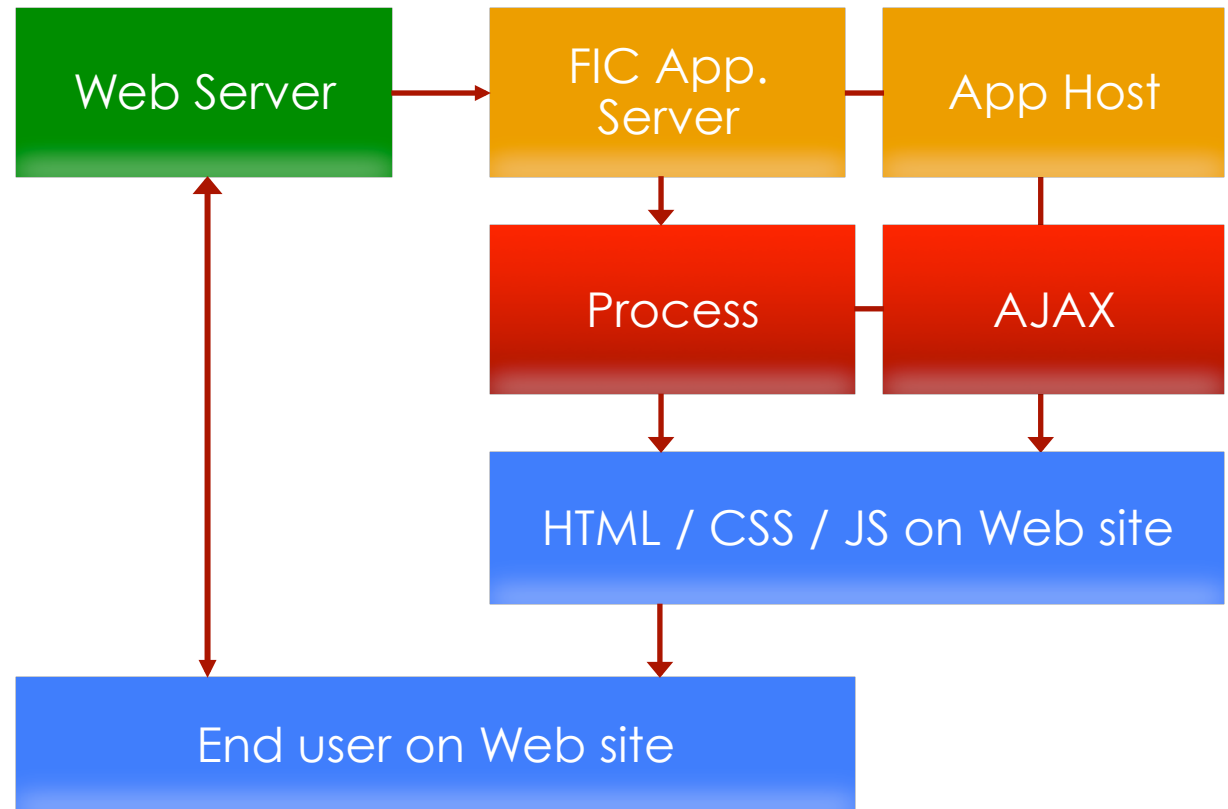
FIC App. Server (FAS):
VFP/wConnect-based
FoxInCloud Application Server

App Host:
Private session where adapted
application runs

HTML/CSS/JS gen:
clones your app's forms into
HTML/CSS/JS which becomes
the designated website (i.e.
www.mysite.com)

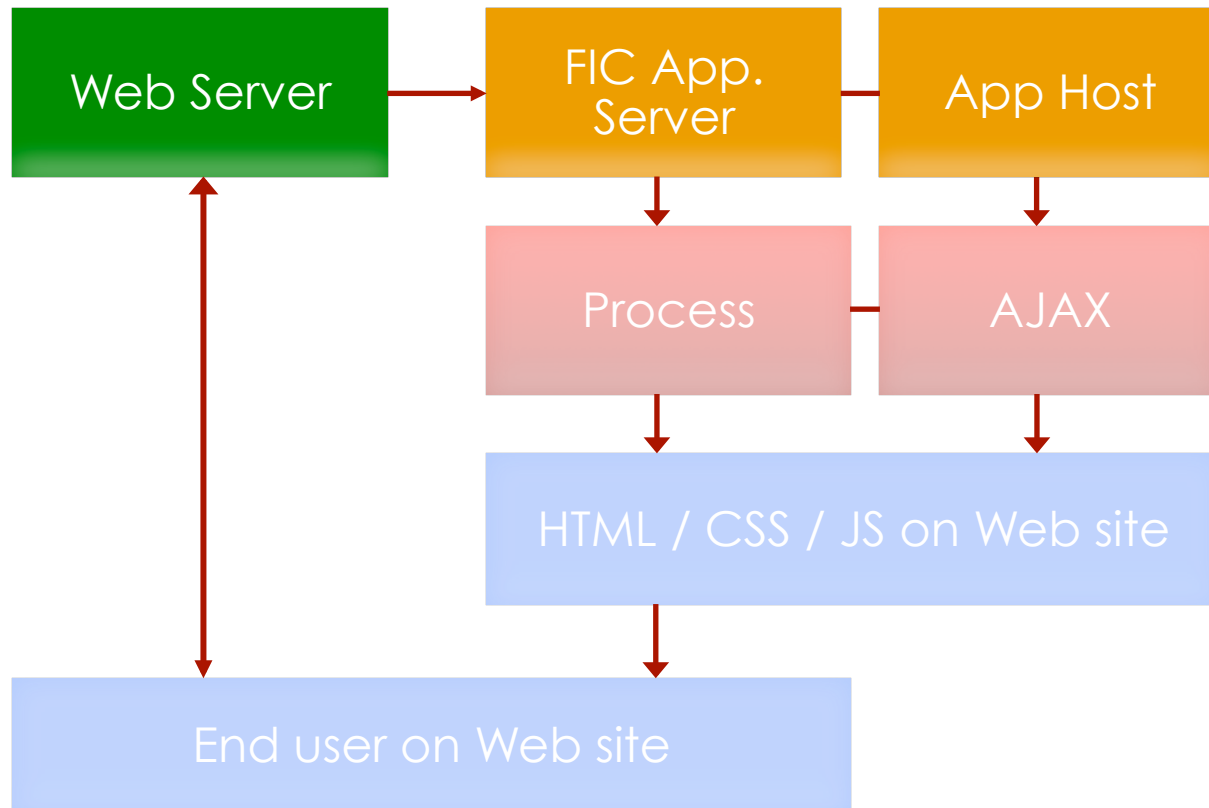
Process:
Processes HTTP requests
received from the site

AJAX:
Processes user actions on forms
thru AJAX requests



Session 1, episode 1

Connecting Web server to FAS



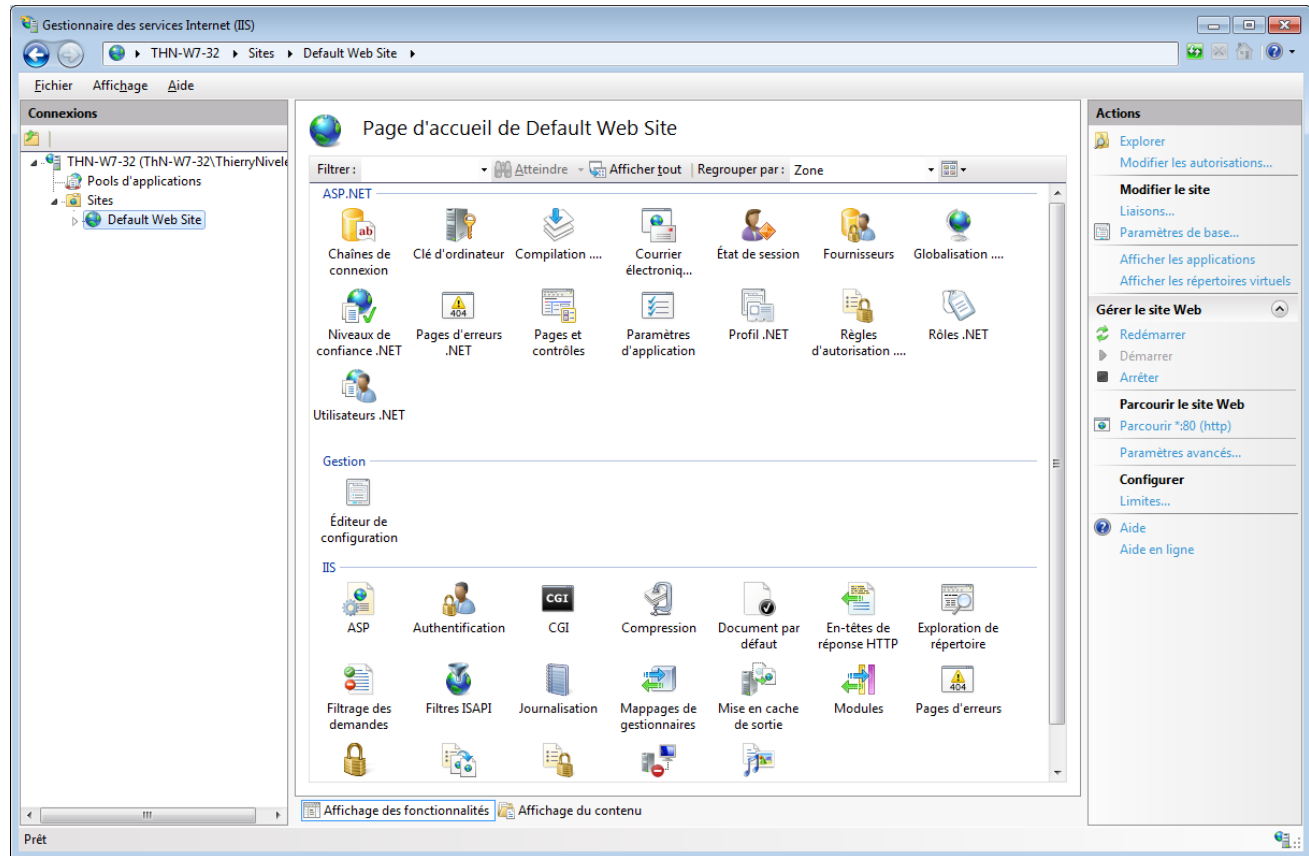


Grabbing requests from localhost web server

IIS comes with most Windows editions

Note: the free FoxInCloud Adaptation Assistant (FAA) automates all IIS settings to come;

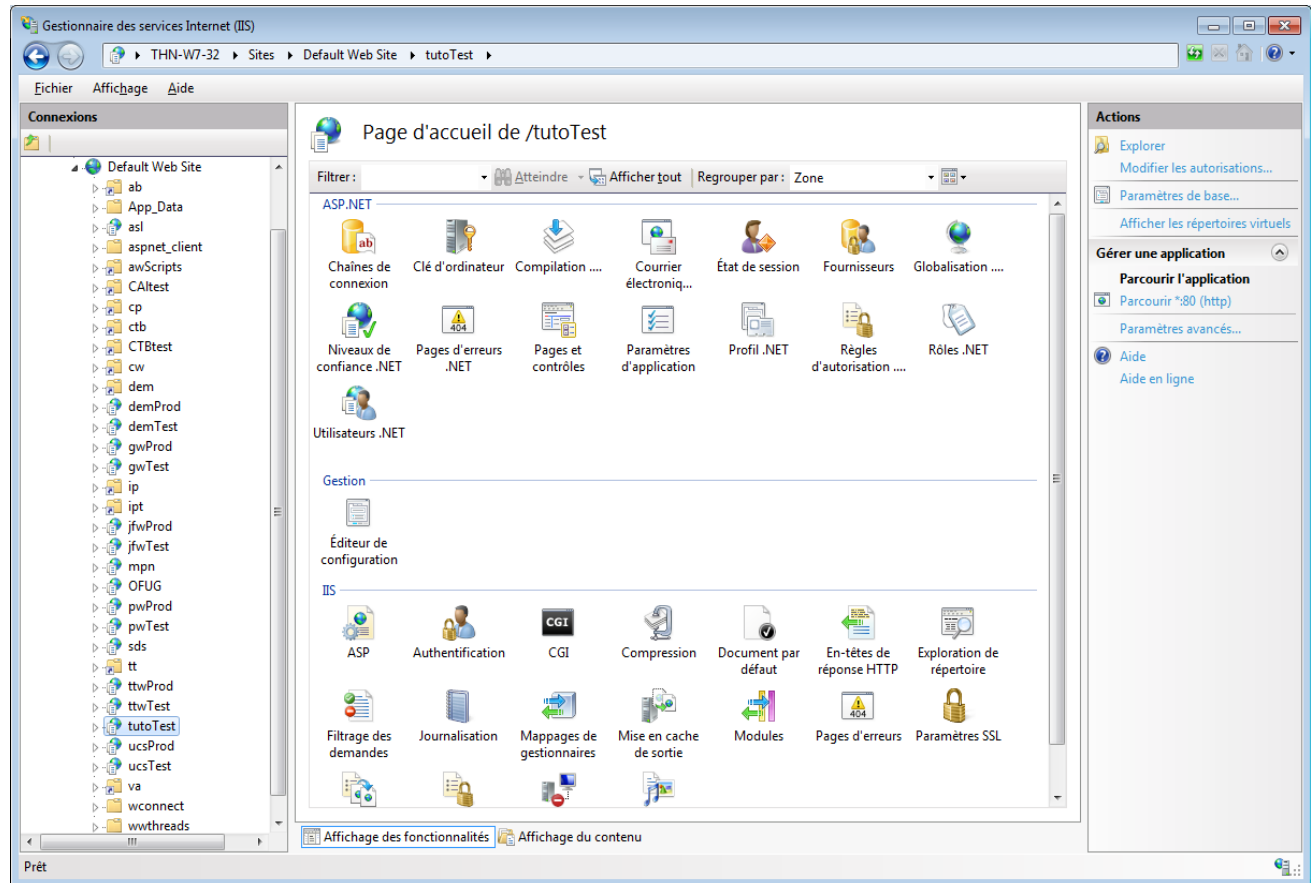
Session 3 demonstrates this automated installation.





Adding an IIS application

An “IIS application” is a virtual directory where an application can run





Mapping an URL extension to your FAS

IIS allows URLs with a given extension to be processed by a given module (.exe or .dll)

The screenshot shows the IIS Manager interface for the 'tutoTest' site. The 'Mappages de gestionnaires' (Script Mappings) tab is active, displaying a list of mappings. Two dialog boxes are open over the interface:

- Modifier le mappage de scripts (Modify Script Mapping):** Shows the configuration for the mapping with the extension '*.tuto'. The 'Exécutable' (Executable) is set to 'C:\Program Files\VF9\Tools\AB\AW\Samples\FIC\FicTuto\site\bin\...', and the 'Nom' (Name) is 'tutoTest'.
- Restrictions des demandes (Request Restrictions):** Shows the 'Accès' (Access) tab, where 'Exécution' (Execute) is selected as the required access for the handler.

The background table shows the following script mappings:

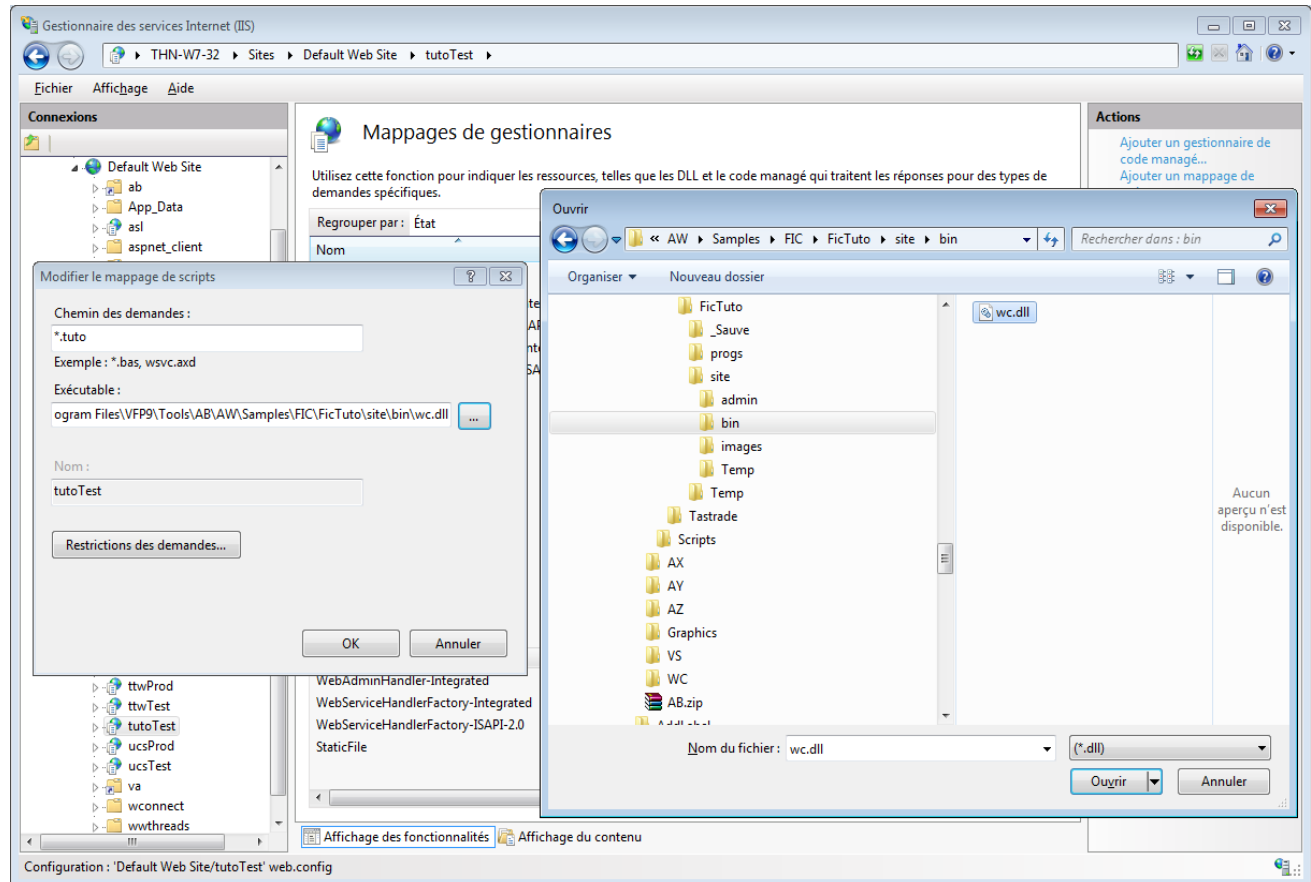
Module	Extension	État	Type de chemin	Gestionnaire
WebAdminHandler-Integrated	WebAdmin.axd	Activé	Non défini	System.Web.Ha...
WebServiceHandlerFactory-Integrated	*.asmx	Activé	Non défini	System.Web.Ser...
WebServiceHandlerFactory-ISAPI-2.0	*.asmx	Activé	Non défini	IsapiModule
StaticFile	*	Activé	Fichier ou dos...	StaticFileModule



Target module is wConnect's “wc.dll”

FAS relies on
“West-Wind
web
connect”
(wConnect)

wc.dll is the
IIS extension
that
wConnect
provides.





wc.dll reads settings from wc.ini

Main setting is the folder where **wc.dll** and FAS trade request and response files

When getting an HTTP request from IIS, **wc.dll** writes request details into a file in this folder.

```
C:\Program Files\VFP9\Tools\AB\AW\Samples\FIC\FicTuto\site\bin\wc.ini - Sublime Text 2 (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help

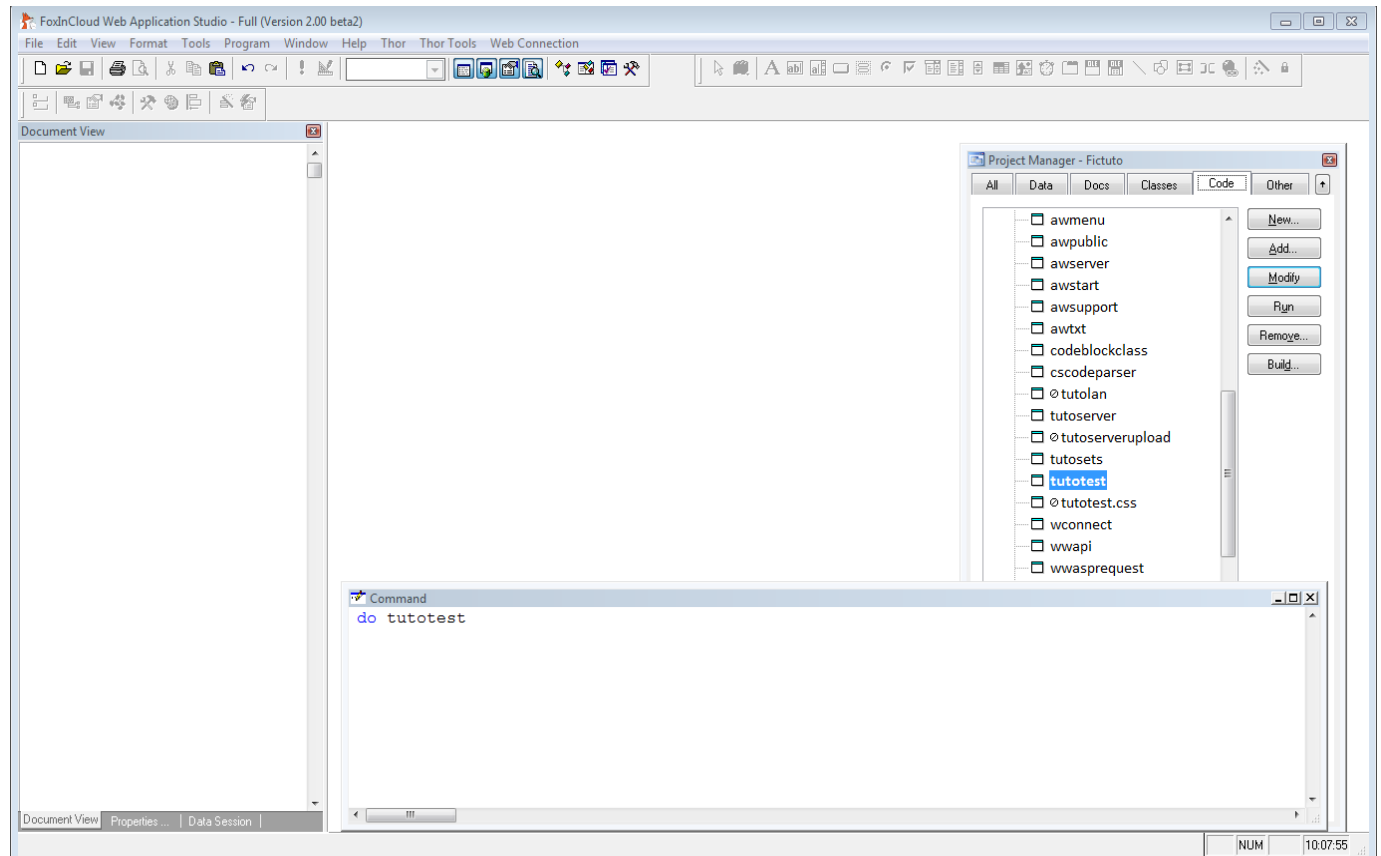
wc.ini
1 [wwcgi]
2 ; Directory where wc.dll and FAS trades files
3 Path=c:\Temp\FICtuto\
4
5 ;*** Time to allow request to finish
6 ;*** Process will be terminated after number of secs
7 ;*** specified here.          REQUIRED
8 Timeout=600
9
10 ;*** Specify how often wc.dll polls for 'completion' message
11 ;*** Specify in milliseconds.  REQUIRED FOR FILE BASED
12 PollTime=100
13
14 ;*** Message File Template (1st 3 letters)
15 ;*** Default is "wc_"
16 ;*** Only needed if using a different template
17 Template=wc_
18
19 ;*** Messaging Mechanism of the DLL:  REQUIRED
20 ;*** File      - Original WEB Connection Logic of
21 ;              file based messaging
22 ;*** Automation - Use OLE Automation Server Interface
23 ;*** Interactive - Call up the VFP development environment via Automation
24 Mechanism=File
25 ;Mechanism=Automation
26
27 ; PostMethod - URLEncoded or INI - Match POSTMETHOD in WCONNECT.H
28 PostMethod=UrlEncoded
29
30 ;*** Account for Admin tasks  REQUIRED FOR ADMIN TASKS
31 ;***      NT User Account  - The specified user must log in
32 ;***      Any              - Any logged in user
33 ;***
34 AdminAccount=

3 lines, 68 characters selected
Tab Size: 4
Plain Text
```



Starting FoxInCloud Application Server (FAS)...

Open
ficTuto.pjx
and run
main
program
tutoTest.prg





FAS initializes application

awAppHost
is app's
session
object.

Both
desktop
and Web
versions of
your app
share the
xxxSets
Settings
class.

```
Visual FoxPro Debugger [break] - tutosets.prg\tutosets.init
File Edit Debug Tools Window Help

Call Stack
+ 9 tutosets.init
  8 awapphost.init_app_
  7 awapphost.init_app
  6 awapphost.init
  5 tutoservertest.setserverpropertie
  4 wwserver.init
  3 tutoservertest.init
  2 awserverstart
  1 tutotest.prg

Trace
Object: tutosets Procedure: Init
44 * =====
45 * -----
46
47 PROCEDURE INIT
48
49 DODEFAULT()
50
51 SET PATH TO '..\..\_Data\; ..\_Data\; ..\Classe\; ..\Progs\; ..\Progs\Bitr
52
53 IF NOT wlAutomation()
54   SET CLASSLIB TO ficSample ADDITIVE
55 ENDIF
56
57 && code for both desktop and web modes
58
59 THIS.SET('SYSFORMATS', 'ON') && THIS.SET() restores original SETting whe
60 THIS.SET('TALK', 'OFF')
61 THIS.SET('SAFETY', 'OFF')
62
63 THIS.SET('COLLATE', 'machine')
64 THIS.SET('EXCLUSIVE', 'OFF')
65 THIS.SET('MULTILOCKS', 'ON')
66 THIS.SET('REPROCESS', -2) && AUTOMATIC
67 THIS.SET('DELETED', 'OFF')
68 THIS.SET('EXACT', 'OFF')
69
70 IF m.this.wlLAN
71
```



FAS enters wait state

FAS waits
for timer
events

```
Visual FoxPro Debugger [run] - awstart.prg:awserverstart
File Edit Debug Tools Window Help
Call Stack Trace
Object: Procedure:
, CreateObject(m.tcServerClass);
)
llResult = Vartype(m.goWCserver) == 'O'
ASSERT m.llResult MESSAGE cAssertMsg(Textmerge( [<<Proper(Program())>> - Could not
IF m.llResult;
AND NOT (Vartype(m.tuFormsLaunch) == 'L' AND m.tuFormsLaunch) && CSS generation,

* Put server live online in file polling mode
* =====
ON SHUTDOWN DO ShutIt IN awStart.prg && Allows system shutdown
READ EVENTS
ON SHUTDOWN
* =====
ENDIF

RELEASE goWCserver
ON ERROR

IF m.llResult
CLOSE DATABASES
CLOSE TABLES && referme les tables de log et de session (wConnect les laisse
IF Program(-1) <= 2 && lancé directement ou par xxxTest|Prod.prg
CLEAR ALL
RETURN
ENDIF
ENDIF
RETURN m.llResult

* =====
PROCEDURE ShutIt && Allows system shutdown
RELEASE goWCserver
```



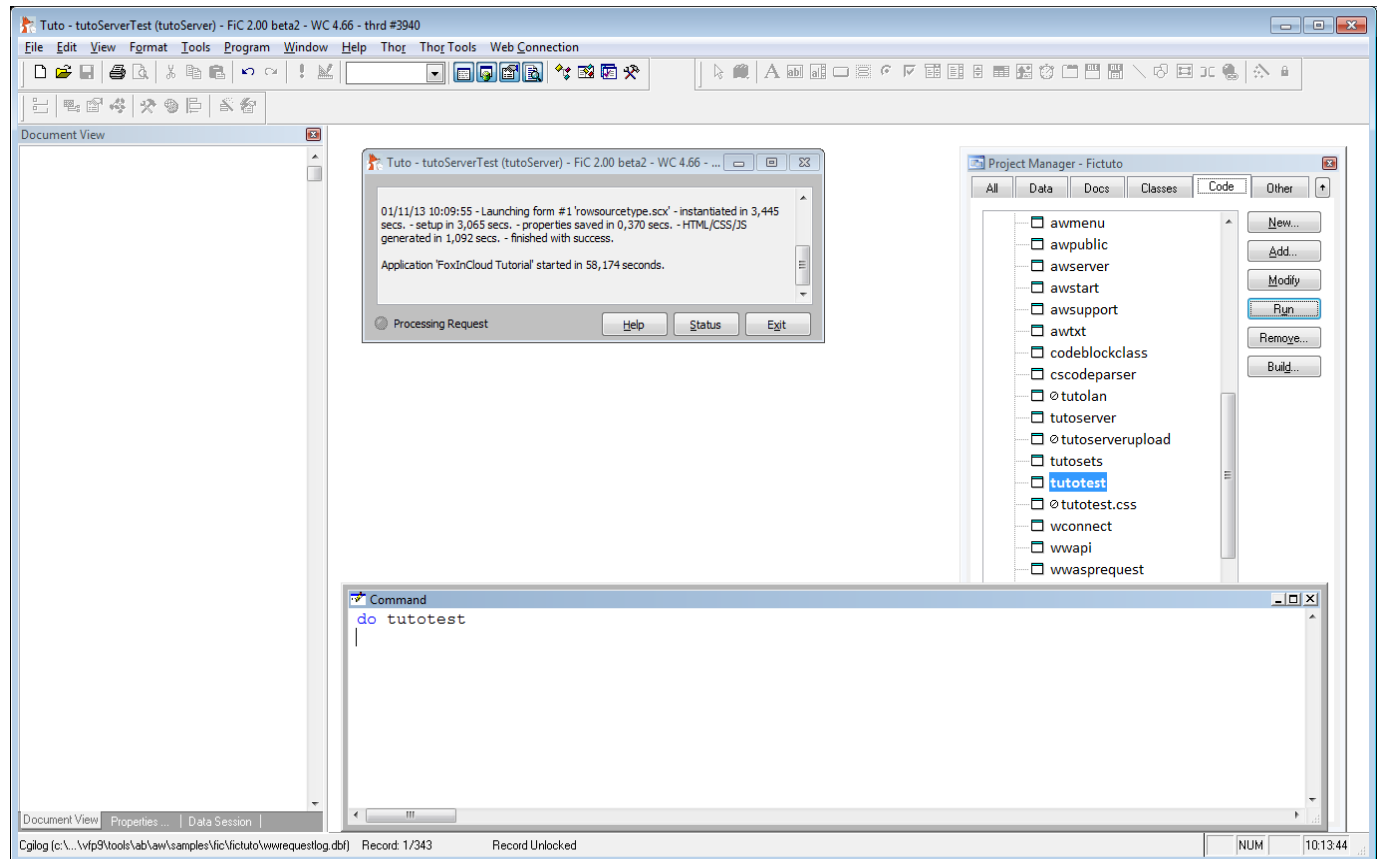

FAS timer fires

In dev. mode, FAS waits for files written by the Web server, containing HTTP request details

```
Visual FoxPro Debugger [break] - w:\visual.vcx\tutotest.prg\timer
File Edit Debug Tools Window Help
Call Stack
  3 tutotest.prg.timer
  2 awserverstart
  1 tutotest.prg
Trace
  Object: tmrfiletimer Procedure: Timer
  *** called with the contents of the message file as a
  *** parameter.
  *****
  LOCAL lcCommandLine, loServer
  loServer = THIS.Parent
  #IF SHAREWARE
  IF SECONDS()-loServer.nSWSeconds>SWTIMEOUT
    THIS.ENABLED=.F.    && Disable Timer
    DO FORM Sharewar
    loServer.nSWSeconds=SECONDS()
    THIS.ENABLED=.T.    && Turn back on
  ENDIF
#ENDIF
  *** Checks for CGI Request TMP file
  *** If found it's stuffed into Queue
  lcCommandLine= THIS.CheckForMessageFile()
  IF !EMPTY(lcCommandLine)
    THIS.ENABLED = .F.
    THIS.INTERVAL = 0
    loServer.ProcessHit(@lcCommandLine)
    THIS.INTERVAL = 5  && Force First request immediately
    THIS.ENABLED = .T.
  ELSE
    *** Reset timer interval to normal
    IF THIS.INTERVAL = 5
      THIS.INTERVAL = loServer.nTimerInterval
    ENDIF
  ENDIF
```



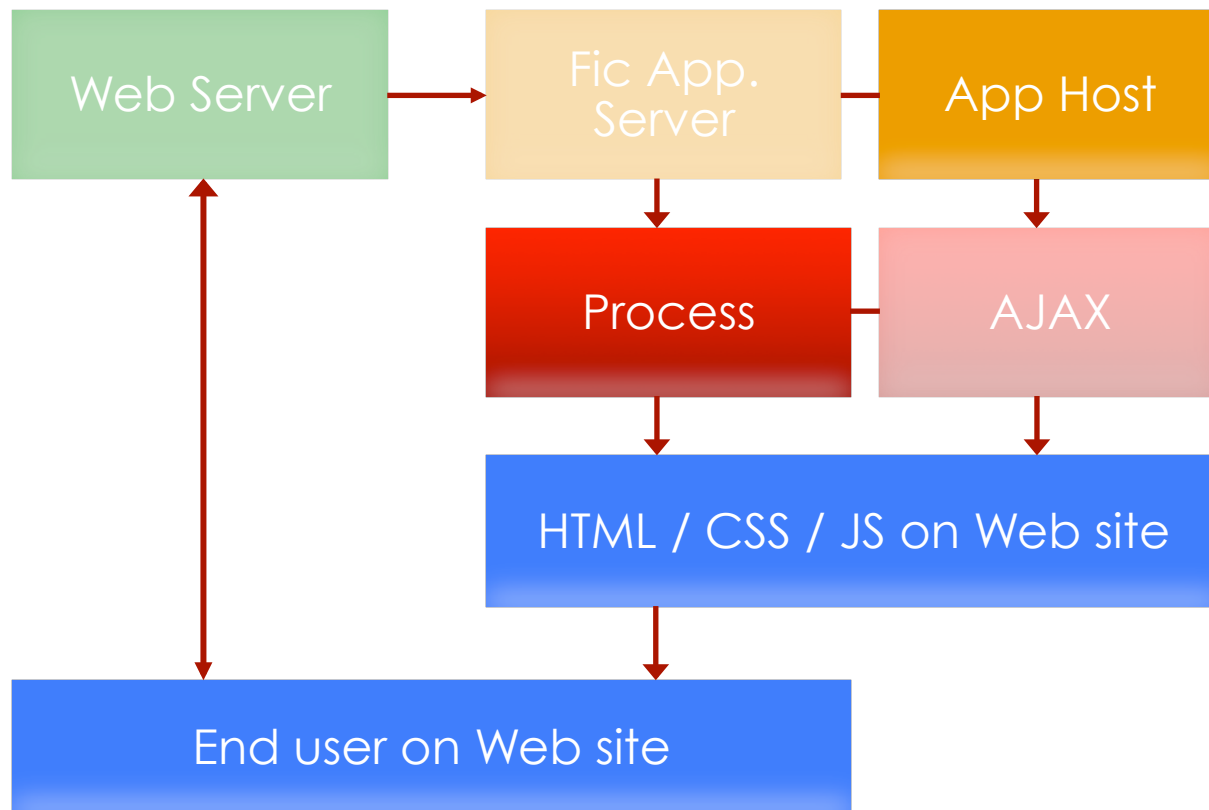
FAS: ready to serve requests!



Any question? Post with screenshot in the 'FoxInCloud' section of <http://west-wind.com/wwThreads/> or <http://www.universalthread.com/>

Session 1, episode 2

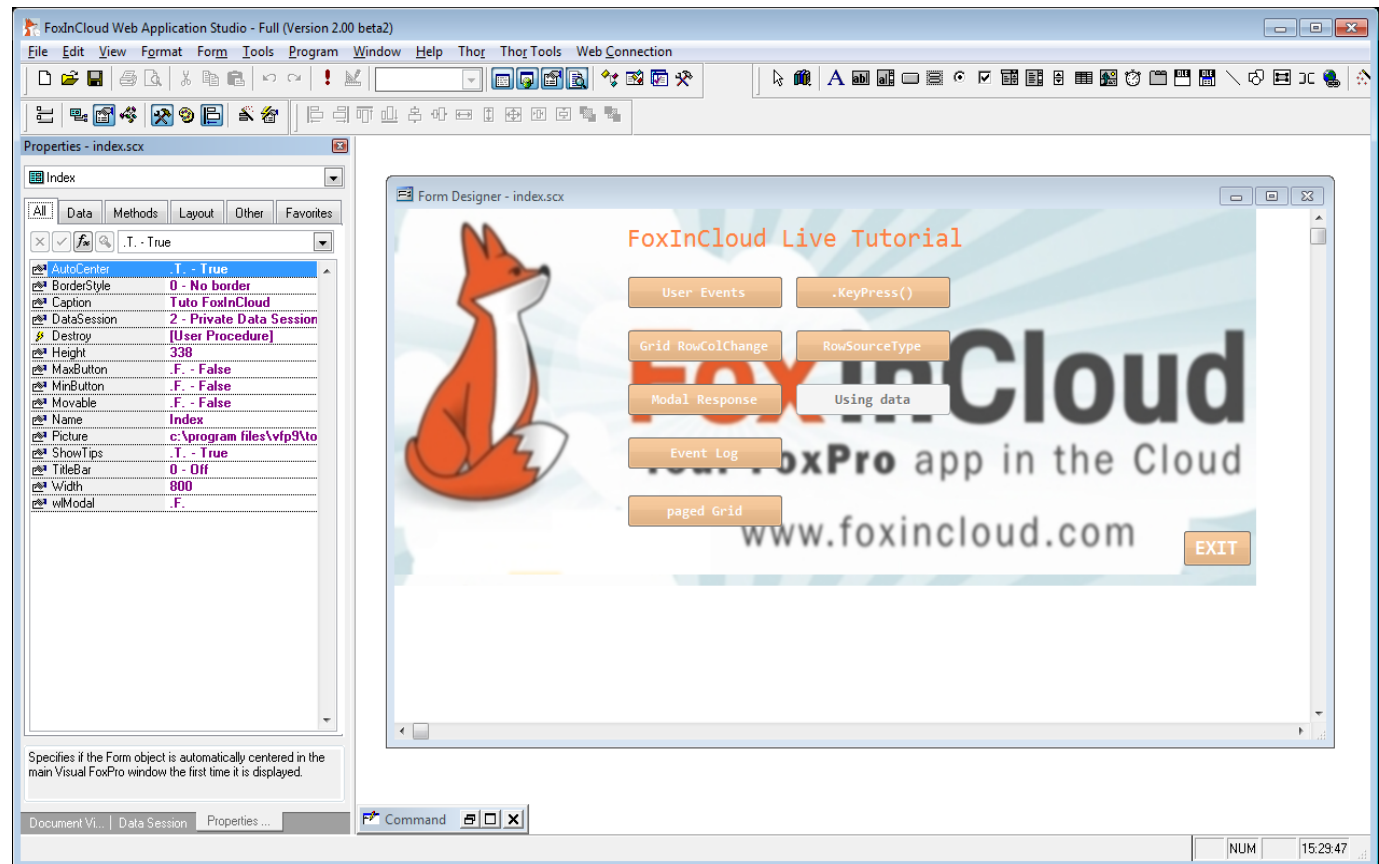
Displaying main form in browser





The form we want to display in the browser

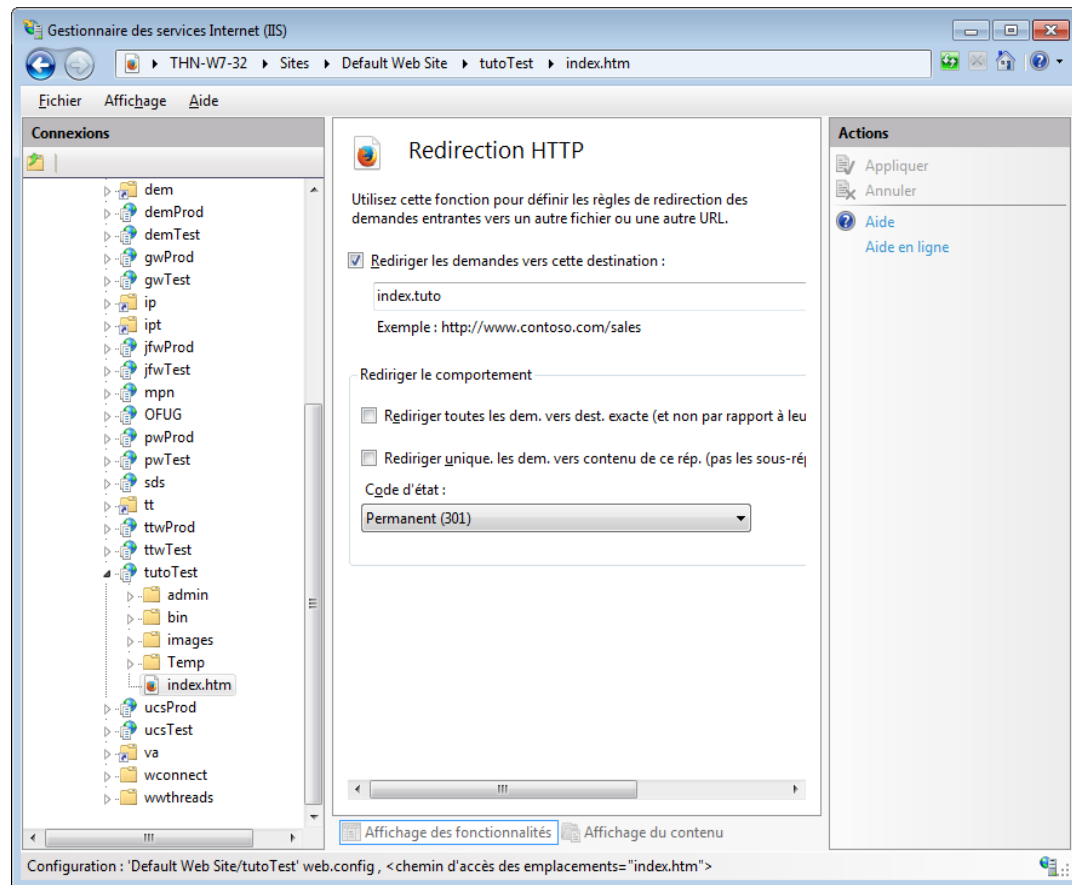
`index.scx` is a regular VFP form with several command buttons and a background picture ...





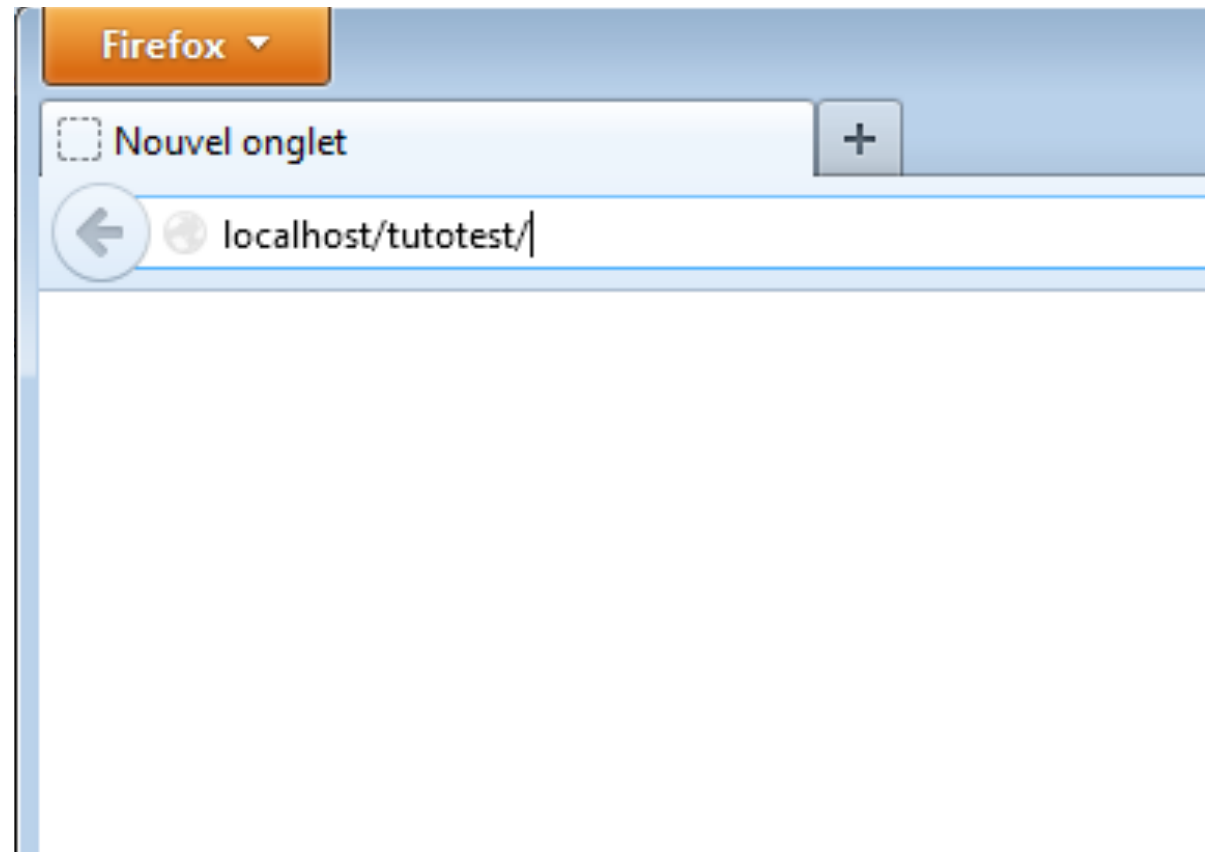
Redirecting IIS default document to FAS home

We redirect IIS's default document `index.htm` to an URL with the extension mapped to our FAS: `index.tuto`





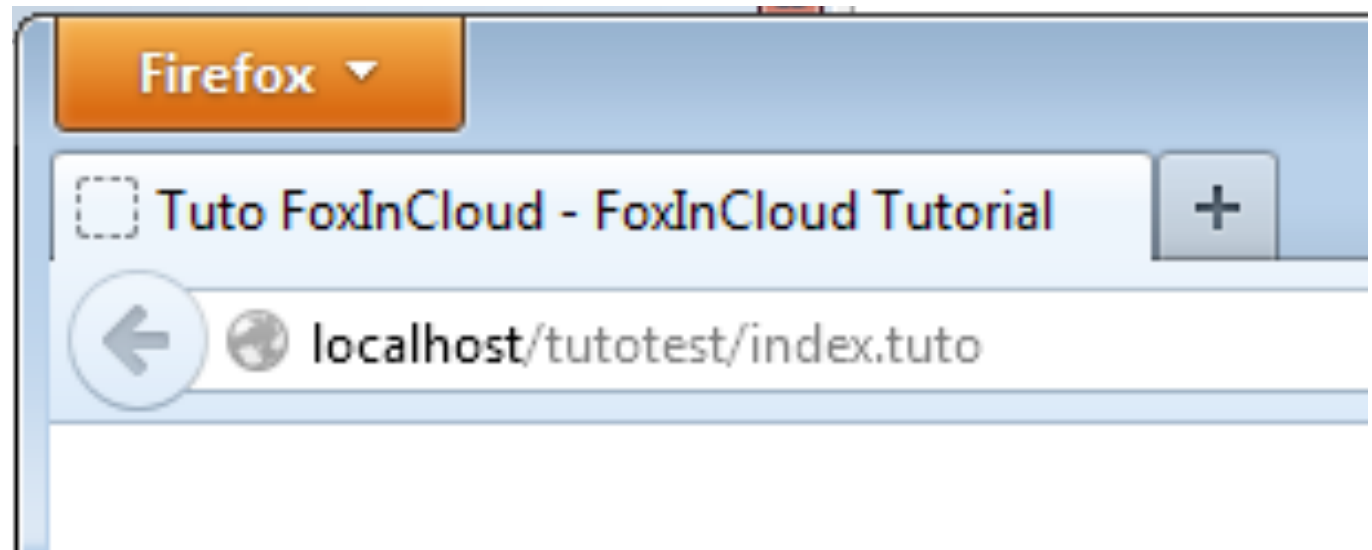
Typing application URL





IIS redirects root URL to our FAS

Due to IIS
redirection
of
`index.htm`
to
`index.tuto`,
typing
application
root URL
`http://
localhost/
tutotest/
yields
application
home page`





wc.dll gets the request from IIS and dumps it into a file

As we mapped *.tuto to wc.dll, IIS transmits the .../index.tuto request to wc.dll

```
Temp.ini
1 |&&Output+File=c:\temp\fictuto\WCDBA3.tmp&DLLVersion=Web+Connection+4%2E67+%2832+servers%29&wcCo
nfig=C%3A%5CProgram+Files%5CVFP9%5CTools%5CAB%5CAW%5CSamples%5CFIC%5CFicTuto%5Csite%5Cbin%5Cwc%2
EINI&REQUEST_METHOD=POST&QUERY_STRING=%26MethAddr%3DInitControlsInet%26ObjAddr%3Dindex%5Fscx%26P
ageInit%3Dtrue%26UserID%3D%26nReq%3D1&Executable+Path=%2Ftutotest%2FMethExec%2Etuto&CONTENT_TYPE
=application%2F%2Dwww%2Dform%2Durlencoded%3B+charset%3DUTF%2D8&CONTENT_LENGTH=19&PATH_INFO=%2Ft
utotest%2FMethExec%2Etuto&PATH_TRANSLATED=C%3A%5CProgram+Files%5CVFP9%5CTools%5CAB%5CAW%5CSamp
les%5CFIC%5CFicTuto%5Csite%5CMethExec%2Etuto&SCRIPT_NAME=%2Ftutotest%2FMethExec%2Etuto&PHYSICAL_PA
TH=C%3A%5CProgram+Files%5CVFP9%5CTools%5CAB%5CAW%5CSamples%5CFIC%5CFicTuto%5Csite%5CMethExec%2E
tuto&SERVER_PROTOCOL=HTTP%2F1%2E1&SERVER_SOFTWARE=Microsoft%2DIIS%2F7%2E5&SERVER_NAME=localhost&S
ERVER_PORT=80&REMOTE_HOST=%3A%3A1&REMOTE_ADDR=%3A%3A1&HTTP_REFERER=http%3A%2F%2Flocalhost%2Ftuto
test%2Findex%2Etuto&HTTP_USER_AGENT=Mozilla%2F5%2E0+%28Windows+NT+6%2E1%3B+rv%3A24%2E0%29+Gecko%
2F20100101+Firefox%2F24%2E0&HTTP_COOKIE=%5F%5Futma%3D111872281%2E777200636%2E1310508010%2E137783
1031%2E1377947599%2E174%3B+%5F%5Futmz%3D111872281%2E1310508010%2E1%2E1%2Eutmsr%3D%28direct%29%7
Cutmccn%3D%28direct%29%7Cutmcmd%3D%28none%29%3B+ip%3D3970QTW9T%3B+pus%2Didv%3DA0039d7dea3096fc47
1da81b55cbb68e9d69%3B+mpn%3D3NU0TNRAV%3B+tt%3D37F18TQ3Y%3B+ebNewBandWidth%5F%2Elocalhost%3D2247%
253A1365827628263%3B+tuto%3D3VT1AYS89%3B+%5F%5Futm%3D111872281%3B+ASPSESSIONIDSSQRBBQ%3DPFBBJ
EBBAFHNGOCGIKAOEOC&APPL_PHYSICAL_PATH=C%3A%5CProgram+Files%5CVFP9%5CTools%5CAB%5CAW%5CSamples%5C
FIC%5CFicTuto%5Csite%5C&GMT_OFFSET=3600&ALL_HTTP=HTTP_CACHE_CONTROL:no-cache
2 HTTP_CONNECTION:keep-alive
3 HTTP_PRAGMA:no-cache
4 HTTP_CONTENT_LENGTH:19
5 HTTP_CONTENT_TYPE:application/x-www-form-urlencoded; charset=UTF-8
6 HTTP_ACCEPT:text/javascript, text/html, application/xml, text/xml, */*
7 HTTP_ACCEPT_ENCODING:gzip, deflate
8 HTTP_ACCEPT_LANGUAGE:fr, fr-fr;q=0.8, en-us;q=0.5, en;q=0.3
9 HTTP_COOKIE: __utma=111872281.777200636.1310508010.1377831031.1377947599.174; __utmz=111872281.
1310508010.1.1.utmcsr=(direct)|utmccn=(direct)|utmcmd=(none); ip=3970QTW9T; pus-
idv=A0039d7dea3096fc471da81b55cbb68e9d69; mpn=3NU0TNRAV; tt=37F18TQ3Y; ebNewBandWidth_
localhost=2247%3A1365827628263; tuto=3VT1AYS89; __utmc=111872281;
ASPSESSIONIDSSQRBBQ=PFBBJJEBBAFHNGOCGIKAOEOC
10 HTTP_HOST:localhost
11 HTTP_REFERER:http://localhost/tutotest/index.tuto
12 HTTP_USER_AGENT:Mozilla/5.0 (Windows NT 6.1; rv:34.0) Gecko/20100101 Firefox/34.0
```




Timer fires, FAS reads request from file

As soon as FAS timer fires and finds a request file in the folder shared with wc.dll, FAS timer reads its content.

(Default timer interval is 200 ms.)

The screenshot shows the Visual FoxPro Debugger interface. The Call Stack on the left indicates the execution path: 4 tutoSERVERtest.tmrfiletimer.checkf, 3 tutoSERVERtest.tmrfiletimer.timer, 2 awserverstart, and 1 tutotest.prg. The Trace window on the right shows the execution of the checkf procedure, with the cursor at line 31. The code in the Trace window includes: opening a file (lhFile=FOPEN), reading its content (DO WHILE !PEOF), saving the file name and RET file name (loServer.cTempMessageFile and loServer.cTempMessageRetFile), and closing the file (FCLOSE).

```
18
19     *** Open file and try to read request info
20     IF !EMPTY(lcFileName)
21         lcFullFileName=loServer.cTempFilePath+TRIM(lcFileName)
22
23         lhFile=FOPEN(lcFullFileName,2)
24         IF lhFile#-1
25             *** Read the entire input file
26             DO WHILE !PEOF(lhFile)
27                 lcCommandLine = lcCommandLine + FREAD(lhFile,16484)
28             ENDDO
29
30             *** save the Temp file name and the RET file as well
31             loServer.cTempMessageFile=lcFullFileName
32             loServer.cTempMessageRetFile=FORCEEXT(lcFullFileName,"RET")
33
34             =FCHSIZE(lhFile,0)   && Don't allow another machine to get the commandline
35             =FCLOSE(lhFile)
```

The Debug Output window at the bottom shows the value of lcCommandLine, which is a long URL string starting with 'm:\commandline=' and ending with '2'.



FAS routes request to application's Process object

Inside FAS, the `.tuto` extension maps to the `tutoProcess` class.

This class processes the request.

```
Visual FoxPro Debugger [break] - awserver.prg:tutoservertest.routerequest
File Edit Debug Tools Window Help
Call Stack
6 tutoservertest.routerequest
5 tutoservertest.process
4 tutoservertest.processshit
3 tutoservertest.tmrfiletimer.timer
2 awserverstart
1 tutotest.prg
Trace
Object: tutoservertest Procedure: routerequest
707 DO CASE
708
709 CASE InList(m.tcParameter, 'FOXINCLOUD', 'FOXLANWEB', 'ZENBUYER', 'INTUICA
710 OR Ascan(m.this.ascriptMapExt, m.tcExtension, 1, -1, 1, 7) > 0 && Script
711
712 loProcess = CreateObject(m.this.cawProcessClass, m.this)
713 RETURN loProcess.Process()
714
715 CASE InList(m.tcParameter, 'WWMAINT', 'AWMAINT', 'AZMAINT')
716 loProcess = CreateObject('awMaint', m.this)
717 RETURN loProcess.Process()
718
719 CASE InList(m.tcExtension, 'WC', 'WCS', 'FXP')
720 RETURN wwScriptMaps(m.this)
721
722 CASE m.tcExtension == 'WWWSCAN'
```

Name	Value	Type
m.tcExtension	"TUTO"	C
m.ascriptmapext	(Array)	A
ascriptmapext[1]	"php"	C
ascriptmapext[2]	"pl"	C
ascriptmapext[3]	"vfp"	C
ascriptmapext[4]	"fic"	C
ascriptmapext[5]	"zip"	C
ascriptmapext[6]	"tuto"	C
m.this.cawProcessClass	"tutoProcess"	C

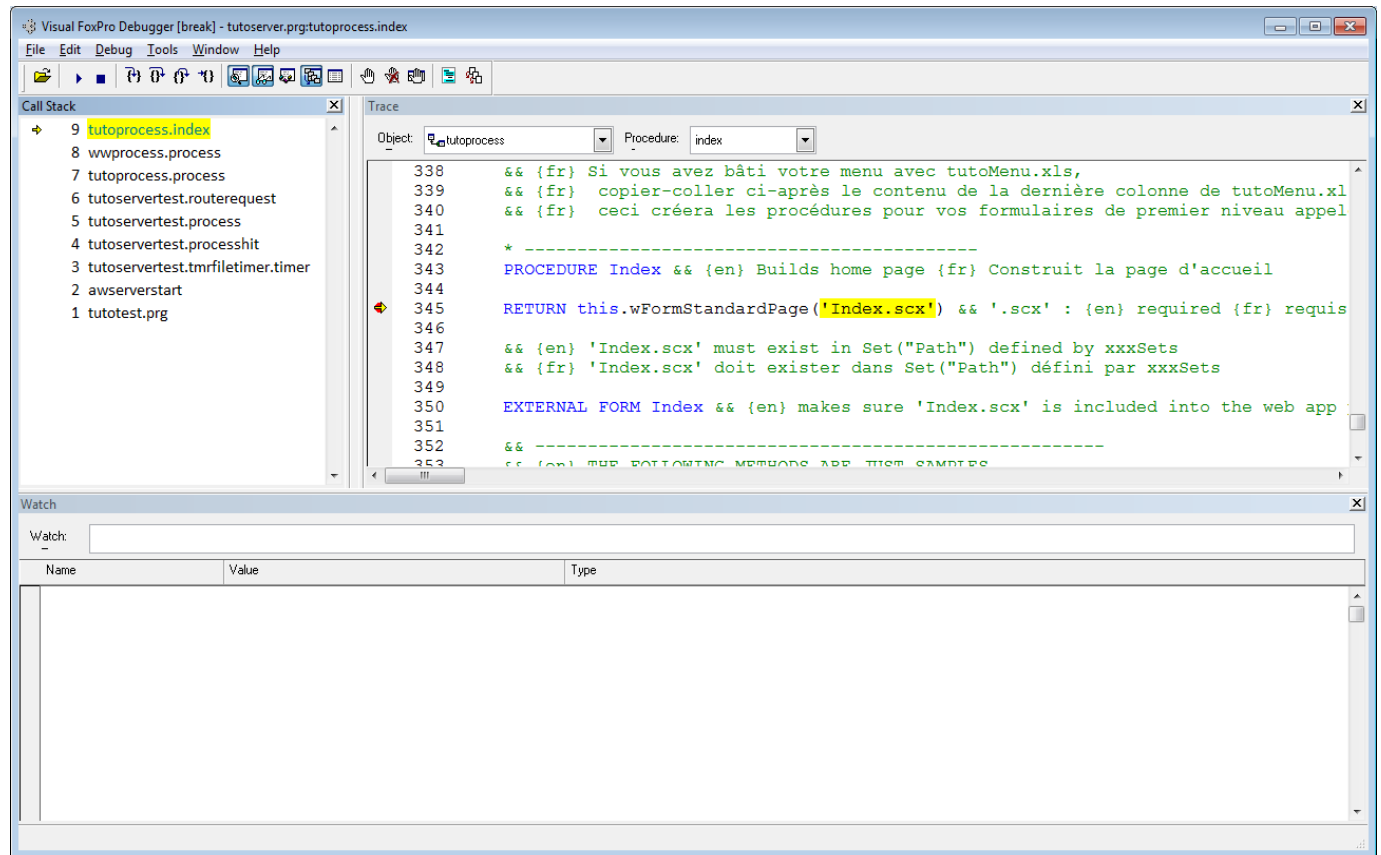


Application executes process class method

The process class executes the method named after justStem(url)

("index.tuto" executes the method 'index' of process class mapped to '.tuto')

All FoxInCloud member names begin with 'w'





Process asks application host for a reference to the form

oAppHost is
FoxInCloud
application
host object.

Application
host object
keeps a pool
of references
to the
various forms
in the
application

```
Visual FoxPro Debugger [break] - awserver.prg:tutoprocess.wform
File Edit Debug Tools Window Help
Call Stack
  11 tutoprocess.wform
  10 tutoprocess.wformstandardpage
  9 tutoprocess.index
  8 wwprocess.process
  7 tutoprocess.process
  6 tutoservertest.routerequest
  5 tutoservertest.process
  4 tutoservertest.processhit
  3 tutoservertest.tmrfiletimer.timer
  2 awserverstart
  1 tutotest.prg
Trace
  Object: tutoprocess Procedure: wform
  2714 )))
  2715 IF m.llResult
  2716
  2717     lcParms = wcFormParms(m.lnParm)
  2718     * =====
  2719     llResult = m.this.oAJAX.FormInitSave(m.tcForm &lcParms)
  2720     * =====
  2721     this.cResult = Iif(m.llResult, Space(0), m.this.oAJAX.cResult)
  2722     IF m.llResult
  2723
  2724         loResult = this.oAppHost.oFormOfName(m.tcForm)
  2725         llResult = Vartype(m.loResult) == 'O!'
  2726         this.cResult = Iif(m.llResult, Space(0), m.this.oAppHost.cResult)
  2727     ENDIF
  2728 ENDIF
  2729 ENDIF
  2730
  2731 = m.llResult OR this.Warning(Textmerge([<math>\langle\langle\text{Proper(Program())>>()>>- <math>\langle\langle\text{m.this.cRe}
  2732
  2733 RETURN m.loResult
  2734
  2735 * -----
Watch
  Watch:
  Name Value Type
  m.tcform "Index.scx" C
```



First time this form is used: App Host must instantiate

App. Host
does not
hold any
reference to
the form
requested:

This form
needs to be
instantiated

Visual FoxPro Debugger [break] - awapphost.prg;awapphost.oform

File Edit Debug Tools Window Help

Call Stack

- 13 awapphost.oform
- 12 awajax.forminitsave
- 11 tutoprocess.wform
- 10 tutoprocess.wformstandardpage
- 9 tutoprocess.index
- 8 wwprocess.process
- 7 tutoprocess.process
- 6 tutoservertest.routerequest
- 5 tutoservertest.process
- 4 tutoservertest.processhit
- 3 tutoservertest.tmrfiletimer.timer
- 2 awserverstart
- 1 tutotest.prg

Trace

Object: awapphost Procedure: oform

```
1565 lnDSID_ = Set("Datasession")
1566 SET DATASESSION TO m.lnDSID
1567 ENDIF
1568
1569 * Instancier l'écran
1570 loResult = m.this.FormLaunch(;&& règle l'utilisateur et son n° de requête &
1571 @m.tuForm;
1572 , m.llSubForm;
1573 , m.lcSuffix;
1574 )
1575
1576 * Rétablir la session de données
1577 IF NOT Empty(m.lnDSID_)
1578 SET DATASESSION TO m.lnDSID_
1579 ENDIF
1580
1581 llResult = Vartype(m.loResult) == 'O';
1582 AND this.oForm_Props(m.loResult, m.llSubForm, m.tlModal, m.lnDSID, m.lcFor
1583
1584 ENDIF
1585 IF m.llResult
1586
```

Watch

Name	Value	Type
m.tuform	"Index.scx"	C



App Host stores a reference to the form

App. Host instantiates the form using a regular `DO FORM...NAME` command.

This form instance lives inside App Host as long as server runs.

All users share this instance.

Visual FoxPro Debugger [break] - awapphost.prg;awapphost.formlaunch_

Call Stack

- 15 awapphost.formlaunch_
- 14 awapphost.formlaunch
- 13 awapphost.oform
- 12 awajax.forminitsave
- 11 tutoprocess.wform
- 10 tutoprocess.wformstandardpage
- 9 tutoprocess.index
- 8 wwprocess.process
- 7 tutoprocess.process
- 6 tutoservtest.routerequest
- 5 tutoservtest.process
- 4 tutoservtest.processshit
- 3 tutoservtest.tmrfiletimer.timer
- 2 awserverstart
- 1 tutotest.prg

Trace

Object: awapphost Procedure: formlaunch_

```
2004                                     [Form File '<<m.tcForm>>' can't be found]; && d ^
2005                                     ))
2006                                     = m.llResult OR this.Warning(m.this.cResult)
2007                                     IF m.llResult
2008                                     * -----
2009                                     * -----
2010                                     DO FORM (m.tcForm) NAME loResult LINKED NOSHOW
2011                                     * -----
2012                                     * -----
2013                                     ENDIF
2014                                     ELSE
2015                                     llResult = .T.
2016                                     liClass = 0 && this.oClass.getKey(m.tcForm)
2017                                     * -----
2018                                     * -----
2019                                     loResult = Iif(m.liClass > 0;
2020                                     , this.oClass(m.liClass);
2021                                     , CreateObject(m.tcForm);
2022                                     )
2023                                     * -----
2024                                     * -----
2025                                     ENDF
```

Watch

Name	Value	Type
m.tcForm	"index.scx"	C



Form.events() execute

Form
instantiates
and fires
events just
like in
desktop:
.Load(),
.Init(),
.Show(), ...

```
Visual FoxPro Debugger [break] - ficsample.vcxindex.load
File Edit Debug Tools Window Help

Call Stack
+ 16 index.load
  15 awapphost.formlaunch_
  14 awapphost.formlaunch
  13 awapphost.oform
  12 awajax.forminitsave
  11 tutoprocess.wform
  10 tutoprocess.wformstandardpage
  9 tutoprocess.index
  8 wwprocess.process
  7 tutoprocess.process
  6 tutoservertest.routerequest
  5 tutoservertest.process
  4 tutoservertest.processhit
  3 tutoservertest.tmrfiletimer.timer
  2 awserverstart
  1 tutotest.prg

Trace
Object: Index Procedure: Load
1 LOCAL cSetExclu AS STRING,
2   cSetSafe AS STRING
3
4 cSetExclu = SET("Exclusive")
5 cSetSafe = SET("Safety")
6 SET EXCLUSIVE OFF
7 SET SAFETY OFF
8
9 IF !FILE('ficevent.dbf')
10 CREATE TABLE ficevent FREE (idpk I AUTOINC, who C(1), FORM C(50), NAME C(50),;
11   EVENT C(50), BASECLASS C(50), CLASS C(50), TIMESTAMP C(16), inactif L)
12 INDEX ON idpk TAG idpk CANDIDATE
13 INDEX ON TIMESTAMP TAG TIMESTAMP ADDITIVE
14 ELSE
15   USE ficevent SHARED AGAIN IN 0
16 ENDIF
17
18 IF m.cSetExclu == "ON"
19   SET EXCLUSIVE ON
20 ELSE
21   SET EXCLUSIVE OFF
22 ENDIF
23
24 IF m.cSetSafe == "ON"
25   SET SAFETY ON
26 ELSE
27   SET SAFETY OFF
28 ENDIF
29
30 RETURN DODEFAULT()
```



FAS saves form's initial state into a VFP table

As any Web application, FoxInCloud needs save application and forms state for each user, including dataSession;

Initial state is restored whenever a user opens a form.

The screenshot displays the FoxInCloud Web Application Studio interface. The main window shows a table of form controls for 'Index_scx_ini'. The table has columns for Oa, Bc, Pn, Pt, Pv, Pa, Pr, Pp, and C. The 'DataSession' row is highlighted in blue.

Oa	Bc	Pn	Pt	Pv	Pa	Pr	Pp	C
tutocmdrowcolchange	Commandbutton	MOUSEPOINTER	N	Memo	T	T	F	F
tutolanrelease	Commandbutton	ENABLED	L	Memo	T	T	F	F
tutolanrelease	Commandbutton	MOUSEPOINTER	N	Memo	T	T	F	F
tutocmdlogevent	Commandbutton	ENABLED	L	Memo	T	T	F	F
tutocmdlogevent	Commandbutton	MOUSEPOINTER	N	Memo	T	T	F	F
tutocmddata	Commandbutton	ENABLED	L	Memo	T	T	F	F
tutocmddata	Commandbutton	MOUSEPOINTER	N	Memo	T	T	F	F
tutorowsourcetype	Commandbutton	ENABLED	L	Memo	T	T	F	F
tutorowsourcetype	Commandbutton	MOUSEPOINTER	N	Memo	T	T	F	F
tutocmdpagedgrid	Commandbutton	ENABLED	L	Memo	T	T	F	F
tutocmdpagedgrid	Commandbutton	MOUSEPOINTER	N	Memo	T	T	F	F
	Form	WUPK	O	Memo	F	F	F	F
	Form	OBJECTEVENT	C	Memo	F	T	F	F
	Form	OBJECTBINDED	C	Memo	F	T	F	F
	Form	ICOUNTEREVENT	N	Memo	F	T	F	F
	Form	CAPTION	C	Memo	T	T	F	F
	Form	WCDSFORM	C	memo	F	T	F	F
	Form	WNDATASESSIONID	N	Memo	F	T	F	F
	Form	WLMODAL	L	Memo	F	T	F	F
	Form	WLSUBFORM	L	Memo	F	T	F	F
	Form	WUVALUE	X	Memo	T	T	F	F
	Form	DataSession	V	Memo	F	F	F	F

The right pane shows the XML configuration for the data session:

```
<DataSession>
  <aliases>
    <awbcevent>
      <dbf>C:\PROGRAM FILES\VFP9\TOOLS\AB\AW\AWBCEVENT.DBF</dbf>
      <cols></cols>
      <recno>1</recno>
      <relations></relations>
    </awbcevent>
    <data>
      <buffering>1</buffering>
      <buffer>
        <recnos></recnos>
        <deleted></deleted>
        <fldStates></fldStates>
        <rs></rs>
      </buffer>
      <rows></rows>
    </data>
    <tags></tags>
    <order></order>
    <key></key>
    <setFields></setFields>
    <filter></filter>
    <savems>0</savems>
  </DataSession>
```




FAS clones form into HTML, CSS and JavaScript

FoxInCloud's `awHTMLgen` class walks through the form's containers hierarchy to generate HTML CSS JS replicating the layout and behavior of original VFP form

```
Visual FoxPro Debugger [break] - awapphost.prg\awapphost.cformhtml
File Edit Debug Tools Window Help
Call Stack
  16 awapphost.cformhtml
  15 awapphost.formlaunch_
  14 awapphost.formlaunch
  13 awapphost.oform
  12 awajax.forminitsave
  11 tutoprocess.wform
  10 tutoprocess.wformstandardpage
  9 tutoprocess.index
  8 wwprocess.process
  7 tutoprocess.process
  6 tutoservertest.routerequest
  5 tutoservertest.process
  4 tutoservertest.processshit
  3 tutoservertest.tmfiletimer.timer
  2 awserverstart
  1 tutotest.prg
Trace
  Object: awapphost Procedure: cformhtml
  1352
  1353 *-----
  1354 FUNCTION cFormHTML && Code HTML d'un écran de l'application
  1355 LPARAMETERS ;
  1356   toForm AS awFrm OF aw.vcx,; && Écran à rendre
  1357   tlFormMain,; && [.F.] Écran top level, situé sur une page du site (sinon, écran secondaire superposé
  1358   tcScript,; && [''] @ Script de l'écran
  1359   tlStyleInLine && [.F.] Écrire les styles dans la balise des éléments (au lieu de la feuille de styles
  1360
  1361 LOCAL lcResult
  1362 STORE Space(0) TO tcScript, lcResult
  1363
  1364 IF loClass(m.toForm, 'form')
  1365
  1366 WITH m.this.oHTMLgen as awHTMLgen OF awHTML.prg
  1367   .lFormMain = Vartype(m.tlFormMain) == 'L' AND m.tlFormMain && avant d'affecter .oControl !
  1368   .lStyleInLine = Vartype(m.tlStyleInLine) == 'L' AND m.tlStyleInLine && avant d'affecter .oControl !
  1369   .oControl = m.toForm && cf. oControl_Assign()
  1370   lcResult = .getHTML()
  1371   tcScript = .cScriptJS
  1372 ENDWITH
  1373 ENDIF
  1374
  1375 RETURN m.lcResult
  1376
  1377 *-----
Debug Output
m.lcResult = <!-- Généré le 01/11/13 14:35:06 par FoxInCloud version
2.00 beta2 -->
<div id="index_scx" class="form awfrm ficfrm" tabindex="1">

<button id="index_scx_tutocmdventabiest" class="commandbutton
```



FAS send back a full HTML page including the form

FoxInCloud's `.wFormStandardPage()` method builds a full HTML page including `<head>`, FAS standard and application-specific CSS & JS, `<body>`, etc.

```
Visual FoxPro Debugger [break] - awserver.prg:tutoprocess.wformstandardpage_output
File Edit Debug Tools Window Help
Trace
Object: tutoprocess Procedure: wformstandardpage
2665      </body>
2666    </html>
2667    ENDTTEXT
2668
2669    * Send HTML response back
2670    Response.ContentTypeHeader ( !text/html; charset=utf-8! )
2671    Response.FastWrite ( cUTF8 ( m.m.lcResult ) )
2672
2673    * -----
2674    PROTECTED FUNCTION wFormStandardPage_cKeywords && <meta name="keywords" content="" /> {en} keywords for this meta tag {fr} Mots clés pour cet
2675
2676    RETURN lcCase !

Debug Output
m.lcResult = <!doctype html>
<html xmlns="http://www.w3.org/1999/xhtml" lang="fr" charset="utf-8">
<head>
<meta charset="utf-8"> <!-- http://www.w3.org/International/questions/qa-html-encoding-declarations
http://www.iana.org/assignments/character-sets -->
<meta name="description" content="FoxInCloud Tutorial" />
<meta name="keywords" content="FoxInCloud, SaaS, Cloud, FoxPro, Web, adapter une application client lourd au web" />
<meta name="author" content="FoxInCloud App Admin" />
<meta name="generator" content="FoxInCloud Application Server Version 2.00 beta2" />
<!--[if IE]>
<meta http-equiv="X-UA-Compatible" content="IE=edge" />
<[/endif--> <!-- IE: force rendering mode to the latest available standard -->

<title>Tuto FoxInCloud - FoxInCloud Tutorial</title>
<link type="text/css" rel="stylesheet" href="/awScripts/Window1.3/Themes/default.css" />
<link type="text/css" rel="stylesheet" href="/awScripts/Window1.3/Themes/all.css" />
<link type="text/css" rel="stylesheet" href="/awScripts/Protofish/Protofish.css" />
<link type="text/css" rel="stylesheet" href="/awScripts/AW2.6.1/styles/system/aw.css" />
<link type="text/css" rel="stylesheet" href="/awScripts/iOuvrv-ui-1.10.2/themes/base/inquerv-ui.css" />
```



Form page finally shows up in the browser ...

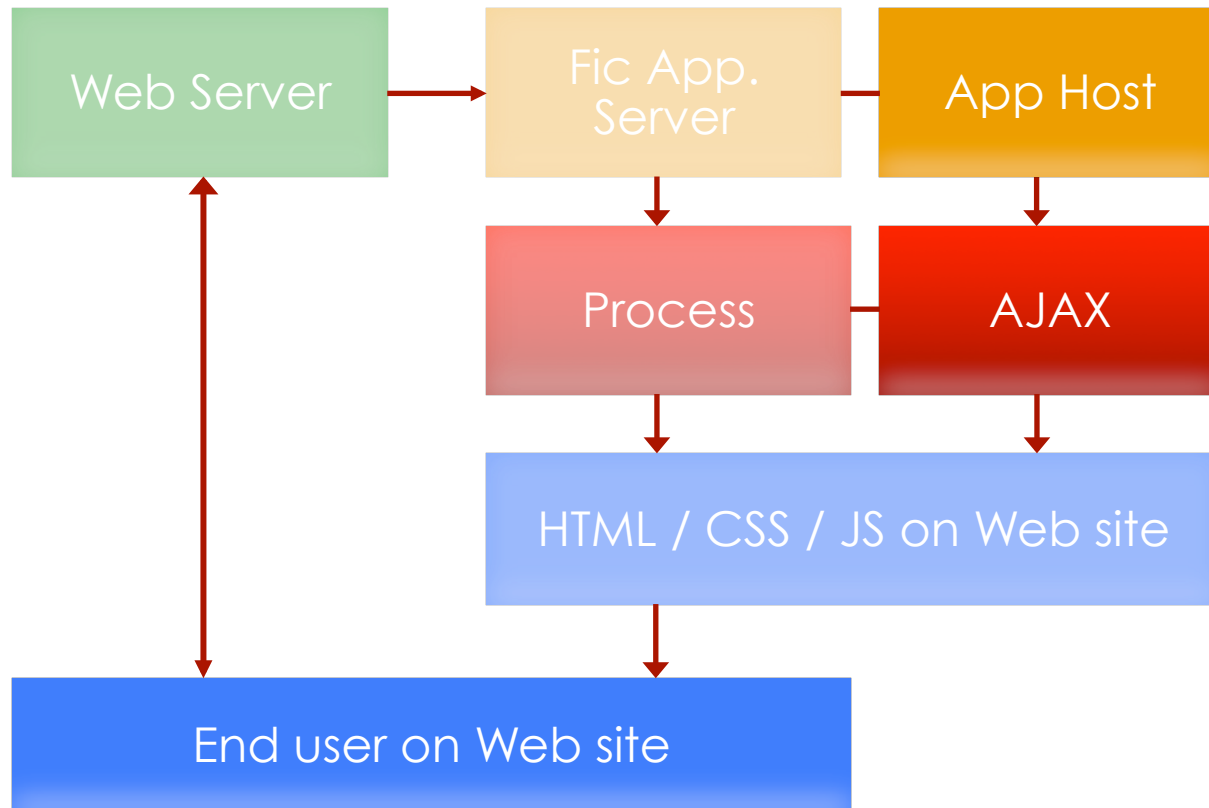
The whole
process, from
FAS receiving
the request to
response
delivered
takes less
than a
second ...

```
index.tuto -  
Launching form #1  
'index.scx'...  
Instantiated in  
.124 secs.  
Setup in  
.006 secs.  
State saved in  
.134 secs.  
HTML/CSS/JS  
generated in  
.334 secs.  
Finished with  
success in  
.914 secs
```



Session 1, episode 3

Interacting with a form





Desktop: clicking a form button opens a child form...

In the desktop application, clicking the `.rowSourceType` button opens the `rowSourceType.scx` form

The screenshot shows the FoxInCloud Web Application Studio interface. The main window displays a desktop application with a fox logo and the text 'FoxInCloud Live Tutorial'. Several buttons are visible: 'User Events', '.KeyPress()', 'Grid RowColChange', 'rowSourceType', 'Modal Response', and 'Using data'. A child form titled 'RowSourceType processing by FoxInCloud' is open in the foreground, showing a list of data sources for various row source types. The list includes:

RowSourceType = 4 && QPR (Parent List)	RowSourceType = 1 && Value	RowSourceType = 2 && Alias	RowSourceType = 3 && SQL Query	RowSourceType = 5 && Array
Aux Joyeux ecclési				
Bigfoot Breweries				
Cooperativa de Que				
Escargots Nouveaux				
Exotic Liquids				
Formaggi Fortini s				
Forêts d'érables				
G'day, Mate				
Gai pâturage				
Grandma Kelly's Ho				
Hell Süßwaren GmbH				
Karkki Oy				
Leka Trading				
Lyngbysild				
Ma Maison				

The child form also shows other row source types: 'RowSourceType = 6 && Fields' and 'RowSourceType = 10 && Collection'. The status bar at the bottom indicates 'Record: 1/758' and 'Record Unlocked'.



Let's click the same button in web browser ...

FAS has generated the same button in HTML

The screenshot shows a Firefox browser window displaying a web page titled "Tuto FoxInCloud - FoxInCloud Tutorial" at the URL "localhost/tutotest/index.tuto". The page content includes a cartoon fox on the left and a list of orange buttons on the right: "User Events", ".KeyPress()", "Grid RowColChange", "RowSourceType", "Modal Response", "Using data", "Event Log", and "paged Grid". The "RowSourceType" button is highlighted with a yellow box. Below the browser window, the developer tools are open, showing the HTML structure of the page. The selected button's HTML code is highlighted in blue:

```
<button id="index_scx-tutorrowsourcetype" class="commandbutton awcmd flocmd" autocomplete="off" type="button" tabindex="5" title="FoxInCloud / VFP Using data" style="display:block;">RowSourceType</button>
```

Any question? Post with screenshot in the 'FoxInCloud' section of <http://west-wind.com/wwThreads/> or <http://www.universalthread.com/>



FoxInCloud has generated a JS `.click()` event handler

Because the `.click()` event of this button is implemented in the original VFP form, FAS has generated a similar event handler in form's JavaScript named `index_scx.js`

The screenshot shows a web browser window at `localhost/tutotest/index.tuto`. The page content includes a fox illustration, the title "FoxInCloud Live Tutorial", and several orange buttons: "User Events", ".KeyPress()", "Grid RowColChange", "RowSourceType", "Modal Response", "Using data", "Event Log", and "paged Grid". The URL `www.foxincloud.com` is visible at the bottom of the page content.

The browser's developer console is open, showing the JavaScript code for `index_scx.js`. The code consists of 12 lines, each using `$.observe()` to bind a click event to the `FoxInCloud.DOMEvent.bind(FoxInCloud)` handler. Line 11 is highlighted in blue:

```
4 $('index_scx-tutocmdmodal').observe('click', FoxInCloud.DOMEvent.bind(FoxInCloud));
5 $('index_scx-tutocmdrowcolchange').observe('click', FoxInCloud.DOMEvent.bind(FoxInCloud));
6 $('index_scx-tutolanrelease').observe('click', FoxInCloud.DOMEvent.bind(FoxInCloud));
7 $('index_scx-tutolanrelease').disabled=true;
8 $('index_scx-tutocmdlogevent').observe('click', FoxInCloud.DOMEvent.bind(FoxInCloud));
9 $('index_scx-tutocmddata').observe('click', FoxInCloud.DOMEvent.bind(FoxInCloud));
10 $('index_scx-tutocmddata').disabled=true;
11 $('index_scx-tutorowsourcetype').observe('click', FoxInCloud.DOMEvent.bind(FoxInCloud));
12 $('index_scx-tutocmbaagedarid').observe('click', FoxInCloud.DOMEvent.bind(FoxInCloud));
```



Clicking this button triggers an AJAX request to FAS

All user interaction events are processed by standard `FoxInCloud.js.DOMEvent` method, resulting in sending an AJAX request to the FAS server; URL details the event occurred

The screenshot displays a web browser window at `localhost/tutotest/index.tuto`. The page content includes a cartoon fox illustration and the text "FoxInCloud Live Tutorial". Below this, there are several orange buttons: "User Events", ".KeyPress()", "Grid RowColChange", "RowSourceType", "Modal Response", "Using data", "Event Log", and "paged Grid". The browser's developer console is open, showing a "RequestSend" event in the "Script" tab. The console log shows the following code snippet:

```
621 new Ajax.Request(this.wcURL(url),
622 { asynchronous: !sync
623 , parameters: this.parameters
624 , onCreate: this.AjaxCreate.bind(this)
625 , onException: this.AjaxException.bind(this)
626 , onFailure: this.AjaxFailure.bind(this)
627 , onSuccess: this.AjaxSuccess.bind(this)
628 , onComplete: this.AjaxComplete.bind(this)
629 }
```

The network log shows a request to `serverrequest` with the following details:

- URL: `"DOMEvent.tuto?&Event=click&ObjAddr=index_scx-tutorowsourcetype&PageInit=&UserID=3VT1AYS89&nReq=2"`
- Object: `{ version=2, cEvent="click", dEvent=Date, ... }`



FAS executes button's .click() method

.DOMEvent ()
goes through several FAS
methods to
end up
executing the
application
button's
.Click ()
method.

.wForm ()
opens
RowSourceTy
pe.scx as a
child form

```
Visual FoxPro Debugger [break] - index.scxindex_scx.tutorowsourcetype.click
File Edit Debug Tools Window Help
Call Stack Trace
Object: tutorowsourcetype Procedure: Click
1 LPARAMETERS nButton, nShift, nXCoord, nYCoord
2 set step on
3 IF (Type('m.THISFORM.wlHTMLgen') == 'L' AND m.THISFORM.wlHTMLgen)
4 RETURN .T. && {fr} Traiter l'événement sur le serveur (bloc ELSE ci-après)
5 ELSE
6 =THISFORM.wForm("RowSourceType.scx")
7 && {fr} aspire 'URowSourceType.scx' dans le projet de l'application Web
8 && {en} makes sure 'RowSourceType.scx' is included into the web app project
9 EXTERNAL FORM RowSourceType
10 ENDIF
```



wForm() asks Application Host for a form reference

Similar to what we saw in the previous episode, `.wForm()` asks application host for a reference to the form; if none exist, AppHost launches the form, saves its state and generate HTML/CSS/JS

```
Visual FoxPro Debugger [break] - aw.vocindex_scx.wformnoshow
File Edit Debug Tools Window Help
Call Stack Trace
Object: index_scx Procedure: wformnoshow
55 )))
56 IF m.luResult
57
58 lcParms = wcFormParms(Pcount() - 2)
59 * =====
60 loForm = .oAppHost.oForm(@m.tuForm, m.this, m.llModal &lcP
61 * =====
62
63 luResult = ICASE(
64 .oAppHost.lFormAnonymousDenied;
65 .BackHome() AND .F.;
66 , NOT .lSuccess(Vartype(m.loForm) == 'O', .oAppHost.cR
67 .F.;
68 , m.loForm;
69 )
70
71 ENDIF
72 ENDWITH
73
74 ELSE && LAN MODE
75
76 *!* (V 1.25) Textile ici = nValue doit être visible quand this l'upload est
```

Watch

Name	Value	Type
m.tuform	"RowSourceType.scx"	C



.wForm() adds child form dialog into AJAX response

Knowing that form's HTML/CSS/JS is available, .wForm() asks the FAS AJAX response object to add the form's HTML/CSS/JS to the AJAX response.

The screenshot shows the Visual FoxPro Debugger interface. The Call Stack window on the left lists the following frames:

- 18 index_scx.wformshow
- 17 index_scx.wform
- 16 index_scx.tutorowsourcetype.click
- 15 index_scx.tutorowsourcetype.click
- 14 awapphost.useraction_
- 13 awapphost.useraction
- 12 awajax.useraction
- 11 awajax.formrequest
- 10 tutoprocess.ajaxformrequest
- 9 tutoprocess.domevent
- 8 wwprocess.process
- 7 tutoprocess.process
- 6 tutoservtest.routerequest
- 5 tutoservtest.process
- 4 tutoservtest.processhit
- 3 tutoservtest.tmrfiletimer.timer
- 2 awserverstart
- 1 tutotest.prg

The Trace window on the right shows the execution of the wformshow procedure. The code is as follows:

```
1 LPARAMETERS toForm AS awFrm OF aw.vcx, tuFormCallBack
2
3 LOCAL llModal, loControl && Contrôle qui a commandé l'exécution du formulaire
4
5 loControl = this.wForm_oControl()
6
7 IF wlWeb ()
8
9 RETURN m.AJAX.DialogAdd(m.toForm, m.tuFormCallBack, m.loControl)
10
11 ELSE
12
13 PRIVATE puValue && Valeur standard retournée par le formulaire si classe (
14 puValue = .NULL.
15
16 llModal = m.toForm.WindowType = 1 && toForm est .NULL. après show()
17
18 * =====
19 toForm.Show && modifie puValue si modal - cf. this.wFormNoShow()
20 * =====
21
22 IF m.llModal
```

The Watch window at the bottom shows the following variables:

Name	Value	Type
mousepointer	0	N
movable	.T.	L
name	"rowsourcetype_scx"	C
objects	(Collection)	A
oledragmode	0	N



Form HTML/CSS/JS is encoded into the XML response

FAS response to AJAX requests is encoded as an XML stream.

FoxInCloud.js parses this XML response into JavaScript instructions to update HTML page.

The screenshot shows the Visual FoxPro Debugger interface. The Call Stack on the left lists the execution path from '1 tutotest.prg' to '20 awajax.xmldialogadd'. The Trace window shows the execution of the 'xmldialogadd' procedure, with line 10186 highlighting the output of the 'TEXT TO this.cXML ADDITIVE TEXTMERGE NOSHOW FLAGS 1' command. The resulting XML is displayed in the Debug Output window at the bottom.

```
10186      TEXT TO this.cXML ADDITIVE TEXTMERGE NOSHOW FLAGS 1
```

```
<HTMLDialog>
  <DivID>rowsourcetype_scx</DivID>
  <DivTitle>RowSourceType processing by FoxInCloud -
FoxInCloud Tutorial</DivTitle>
  <DivHTML>
    &#60;!-- Généré le 01/11/13 16:24:54 par FoxInCloud version
2.00 beta2 --&#62;
```



Browser receives XML response

Web dev. Tools such as Firebug for Firefox provide a very handy debugging environment; here we can see the full XML response received from FAS server, original request, and much more.

```
<?xml version='1.0' encoding='UTF-8' standalone='yes'?'><IntuiCat>
<_script>(function(){ var o = $('link[type="text/css"][href="/tutotest/awDefault_"]')[0]; /* "" for
IE */ if (o &#38;&#38; !o.href.endsWith("/tutotest/awDefault_3X00ZMP5H.css")){ var p = o.previousSiblings
() [0]; o.remove(); o = Object.extend(document.createElement('link'), {href:"/tutotest/awDefault_3X00ZMP5H
.css", type:'text/css', rel:'stylesheet'}) ; p.insert(after:o); } })();</_script>
<HTMLDialog>
  <DivID>rowsourcetype_scx</DivID>
  <DivTitle>RowSourceType processing by FoxInCloud - FoxInCloud Tutorial</DivTitle>
  <DivHTML>
    &#60;!-- Généré le 01/11/13 16:37:21 par FoxInCloud version 2.00 beta2 --&#62;
    &#60;div id=&#34;rowsourcetype_scx&#34; class=&#34;form awfrm ficfrm&#34; tabindex=&#34;9&#34;&#62;

    &#60;div id=&#34;rowsourcetype_scx-tutopgf&#34; class=&#34;pageframe awpgf ficpgf&#34; style=&#34;display
:block;&#34; tabindex=&#34;10&#34;&#62;
    &#60;div id=&#34;rowsourcetype_scx-tutopgf-tutopage1&#34; class=&#34;page awpag ficpag&#34; style=&#34;#34
;display:block;&#34;&#62;
    &#60;div id=&#34;rowsourcetype_scx-tutopgf-tutopage1-tutoinfoboxfic&#34; id=&#34;rowsourcetype_scx-tutopgf-tutopage1-tutoinfoboxfic
&#34; class=&#34;editbox awebx ficbxs&#34; style=&#34;display:block;&#34; title=&#34;Source codes&#34
;&#62;&#60;/div&#62;
    &#60;label id=&#34;rowsourcetype_scx-tutopgf-tutopage1-myblttype2&#34; class=&#34;label awlbl ficlbl
&#34; style=&#34;display:block;&#34;&#62;
    &#60;select id=&#34;rowsourcetype_scx-tutopgf-tutopage1-mylistboxchildtype2&#34; class=&#34;listbox awlst
ficlst&#34; style=&#34;display:block;&#34; title=&#34;Tastrade Products&#34; tabindex=&#34;12&#34; size
=&#34;2&#34; autocomplete=&#34;off&#34;&#62;
    &#60;/select&#62;
    &#60;select id=&#34;rowsourcetype_scx-tutopgf-tutopage1-mylistboxparent&#34; class=&#34;listbox awlst
ficlst&#34; style=&#34;display:block;&#34; title=&#34;Tastrade Suppliers&#34; tabindex=&#34;13&#34; size
=&#34;2&#34; autocomplete=&#34;off&#34;&#62;
      &#60;options&#62;Aux joyeux ecclésiastiques&#60;/options&#62;
      &#60;options&#62;Bigfoot Breweries&#60;/options&#62;
      &#60;options&#62;Cooperativa de Quesos &#39;Las Cabras&#39;&#60;/options&#62;
      &#60;options&#62;Escargots Nouveaux&#60;/options&#62;
      &#60;options&#62;Exotic Liquids&#60;/options&#62;
      &#60;options&#62;Formaggi Fortini s.r.l.&#60;/options&#62;
      &#60;options&#62;Porêts de&#39;érables&#60;/options&#62;
      &#60;options&#62;G&#39;day, Mates&#60;/options&#62;
      &#60;options&#62;Gai pâturage&#60;/options&#62;
      &#60;options&#62;Grandma Kellys&#39; Homestead&#60;/options&#62;
      &#60;options&#62;Heli Süßwaren GmbH &#38;&#38; Co. KG&#60;/options&#62;
```

Any question? Post with screenshot in the 'FoxInCloud' section of <http://west-wind.com/wwThreads/> or <http://www.universalthread.com/>



FoxInCloud.js executes orders read in XML response

FAS builds an XML response to AJAX requests (mainly user events).

XML response embeds JS instructions for the HTML display to reflect VFP form's state after user action, just like in desktop.

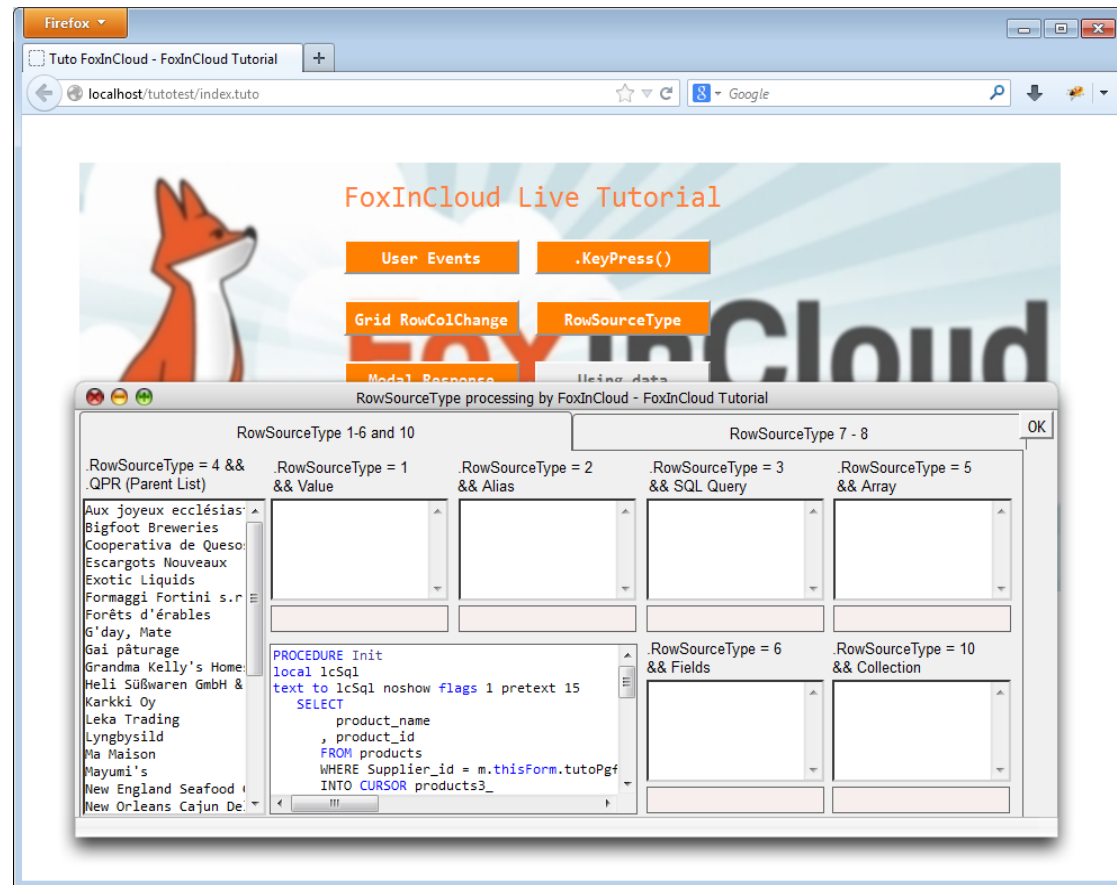
```
916 // Si aucune erreur serveur
917 var loError = this.oDOMElChild(loIntuiCat, 'ServerError'); // cf. awAJAX.XMLHttpRequest()
918 llResult = ! Boolean(loError);
919 if (llResult){
920
921     // Si la version du serveur est fournie, mémoriser et vérifier
922     var serverVersion = this.oDOMElChild(loIntuiCat, 'ServerVersion');
923     if (serverVersion) this.serverVersion = parseFloat(serverVersion.firstChild.nodeValue);
924
925     // Si le résultat de l'événement est fourni, mémoriser
926     this.uResult = this.oDOMElChild(loIntuiCat, 'Result');
927     this.uResult = this.uResult
928     ? this.uValue
929       ( this.oDOMElChild(this.uResult, 'v').firstChild.nodeValue /* valeur littérale cf.
930         , this.oDOMElChild(this.uResult, 't').firstChild.nodeValue /* type cf. awAJAX.XMLRe
931       )
932     : null;
933
934     // Si des scripts sont à exécuter AVANT l'affichage du dialogue
935     script = this.oDOMElChild(loIntuiCat, '_script');
936     if (script){
937         script = script.firstChild.nodeValue;
938         if(script) eval(script); /* script.evalScripts.defer(); */
939     }
940
941     // Afficher les dialogues éventuels
942     this.oDOMElChildren(loIntuiCat, 'HTMLDialog').each(function(loDialog){ // cf. awAJAX.X
943         var llDialog = this.DialogShow(loDialog);
944         if (!llDialog){
945             this.Error((this.langFR ? "Échec de l'affichage du dialogue modal ." : "Modal dialog
946             + ' ' + this.oDOMElChild(loDialog, 'DivID').firstChild.nodeValue);
947         }
948         llResult = llResult && llDialog;
949     }.bind(this));
950     if (llResult){
951
952         // Si des scripts sont à exécuter AVANT les modifications du DOM
953         script = this.oDOMElChild(loIntuiCat, 'script');
954         if (script){
955             script = script.firstChild.nodeValue;
956             if(script) eval(script); /* script.evalScripts.defer(); */
957         }
958     }
959 }
```



Child form shows up in the browser

By comparing the state of each form before and after user action

[`.Click()` in this case], FAS could send all the necessary orders for `FoxInCloud.js` to update the client HTML page accordingly





FoxInCloud

A-Z tutorial, Session 2

Requires FAA & FAS V2.0+

Session 2

Adapting your application

To better follow this session, we recommend you download and install both FoxInCloud Adaptation Assistant (FAA) and FoxInCloud Application Server (FAS) `version 2.0+` from <http://foxincloud.com/download.php>

Both licensed and trial versions of FoxInCloud Application Server install the application presented in this Session in this location:

```
<path to VFP9>\Tools\AB\AW\Samples\Tastrade\
```

To reproduce the steps presented in this session, please prepare the source files as follows:

- Erase the contents of `...\Tastrade\Sandbox\`
- Copy the contents of `...\Tastrade_Original\` into `...\Tastrade\Sandbox\`

You may also read adapted source code from `...\Tastrade\Adapted\`

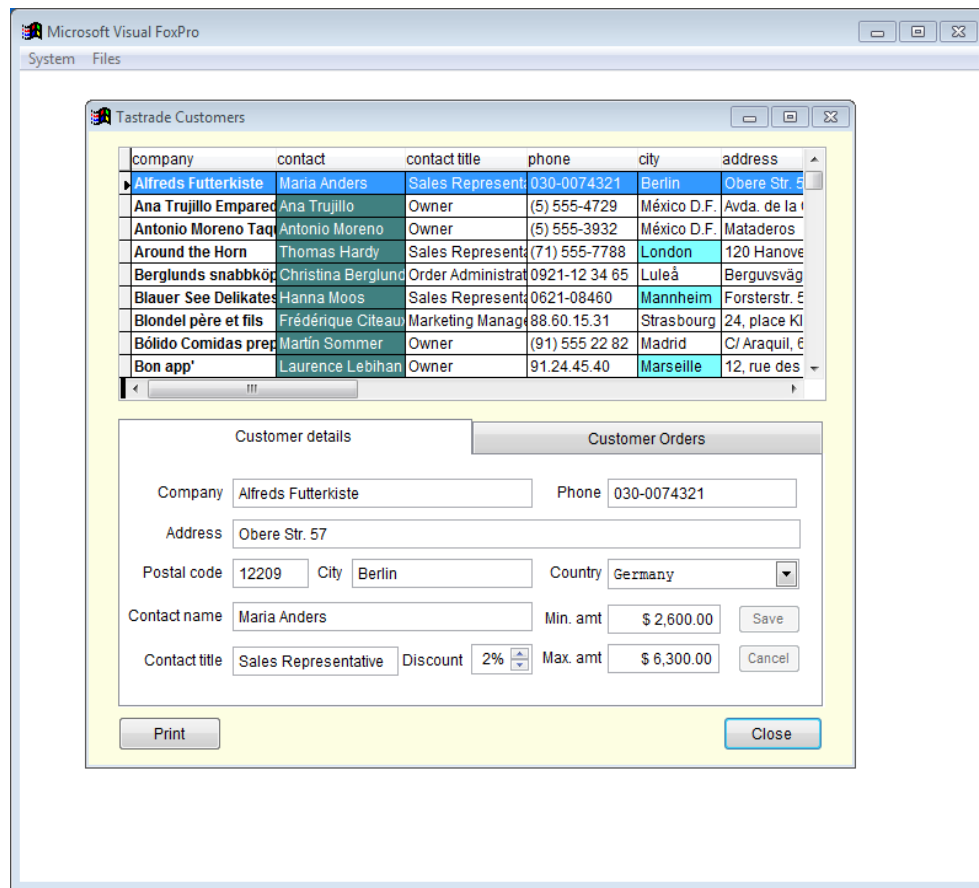
Adapting your application, Agenda



Episode	Subject	Slides
0	A simple business Application	5
1	Analyzing Application (FAA step 1)	8
2.1	Automated Adaptations (FAA step 2)	9
2.2	Manual Adaptations after FAA step 2	20
		42

Session 2, prologue

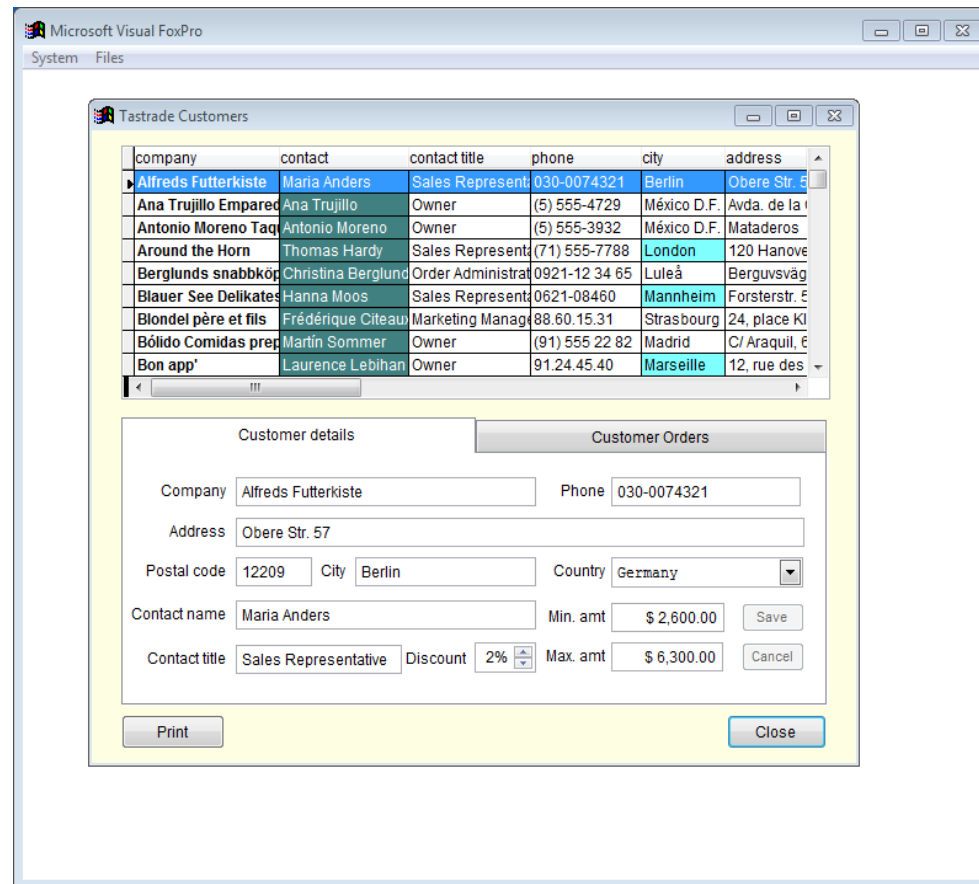
A simple business application





Sample Tastrade Application

Though simple, this application demos the most common VFP business app. features.





Double clicking orders grid opens order form

Orders grid is located on 'orders' page.

The screenshot shows a Microsoft Visual FoxPro window titled 'Tastrate Customers'. A dialog box titled 'Order # 703 for customer 'Alfreds Futterkiste' - original' is open. The form contains the following fields and controls:

- Employee: Andrew Fuller (dropdown menu)
- Date: 09/06/2010
- Ship to section:
 - Recipient name: Alfreds Futterkiste
 - Address: Obere Str. 57
 - City: Berlin, Zip: 12209, Country: Germany
- Discount: 7%
- Pay Term: 15 days, 1 month, 2 months
- Paid:
- Notes: (empty text area)
- Table with columns: product, unit price, quantity

product	unit price	quantity
Aniseed Syrup	\$ 10.00	10
Lakkalikööri	\$ 18.00	20

An 'OK' button is located at the bottom right of the dialog box.



Customer report

Clicking the forms's 'print' button...

Report Preview - Customer.frx

Customer Id: ALFKI Phone: 030 8074321 Fax: 030 8076545

Company Name: Alfreds Futterkiste
Contact Name: Maria Anders
Contact Title: Sales Representative
Address: Obere Str. 57
City: Berlin **Postal Code:** 12209 **Country:** Germany

<u>Order Id</u>	<u>Customer Id</u>	<u>Shipper Id</u>	<u>Order Number</u>	<u>Order Date</u>	<u>Deliver By</u>	<u>Ship To Name</u>
953	ALFKI	1	953	02/07/12	03/21/11	Alfred's Futterkiste
836	ALFKI	3	836	12/09/10	01/06/11	Alfred's Futterkiste
703	ALFKI	1	703	09/06/10	10/18/10	Alfred's Futterkiste
693	ALFKI	3	693	08/27/10	09/24/10	Alfred's Futterkiste
644	ALFKI	3	644	07/19/10	08/16/10	Alfred's Futterkiste
63	ALFKI	1	63	08/21/08	09/18/08	Alfred's Futterkiste



Viewing Source Code

You may
open
either

.?cx

or

.?cx.src

```
tastradefic.vcx.src
*****
*-- Class Library:  c:\program files\vp9\tools\ab\aw\samples\tastrade\_original\class\tastradefic
*****

*****
*-- Class:         tasfrm (c:\program files\vp9\tools\ab\aw\samples\tastrade\_original\class\tastr
*-- ParentClass:  form
*-- BaseClass:    form
*-- Time Stamp:   11/12/13 05:49:08 AM
*
DEFINE CLASS tasfrm AS form

    DoCreate = .T.
    Caption = "Form"
    BackColor = RGB(253,254,226)
    *-- XML Metadata for customizable properties
    _memberdata = ""
    Name = "tasfrm"

    ADD OBJECT cmdok AS commandbutton WITH ;
        Top = 204, ;
        Left = 324, ;
        Height = 27, ;
        Width = 35, ;
        Cancel = .T., ;
        Caption = "OK", ;
        Name = "cmdOK"

quit
modify comm ?
modifyv comm "C:\Program Files\VP9\Tools\AB\AW\Samples\Tastrade\Sandbox\Class\tastradef
```

Session 2, episode 1

Analyzing application (FAA step 1)

The screenshot displays the FoxInCloud Adaptation Assistant (FAA) software interface. The main window is titled "FoxInCloud Adaptation Assistant version 2.00 beta3 (copy mode) - Support 11/12/13". The interface includes a menu bar (File, Edit, View, Tools, Program, Window, Help) and a toolbar. The main workspace shows a "What's new?" callout, a table of adaptations, and a summary of the analysis results.

Table of Adaptations:

Object/Class	Base Class	Module	Type	Adaptation
frmcustomer	Form	Refresh	Automated adaptation	Refresh Method
frmcustomer	Form	Refresh	Manual adaptation after step	Requery() to be
frmcustomer	Form	Refresh	Manual adaptation after step	Requery() to be
frmcustomer.cmdok	Commandbutton	Refresh	Automated adaptation	Refresh Method
frmcustomer.grdcl	Grid	AfterRowColChange	Manual adaptation after step	Event code mus
frmcustomer.pgfr	Pageframe	pagDetails.Init	Manual adaptation after step	BindEvent(): ad
frmcustomer.pgfr	Pageframe	pagDetails.Init	Manual adaptation after step	BindEvent(): ad
frmcustomer.pgfr	Pageframe	pagDetails.Init	Manual adaptation after step	BindEvent(): ad

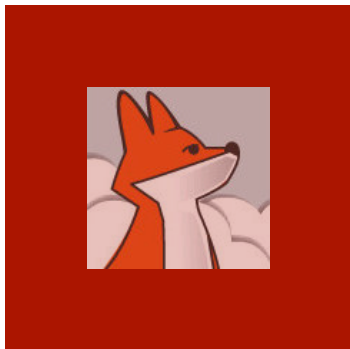
Summary:

- 6 Files
- 165 Classes
- 4 Forms
- 195 Modules
- 128 Instructions
- 17 Manual adaptations
- Manual adaptations (%) 13.28 %
- Estimated time 0.6 days

Code Snippet:

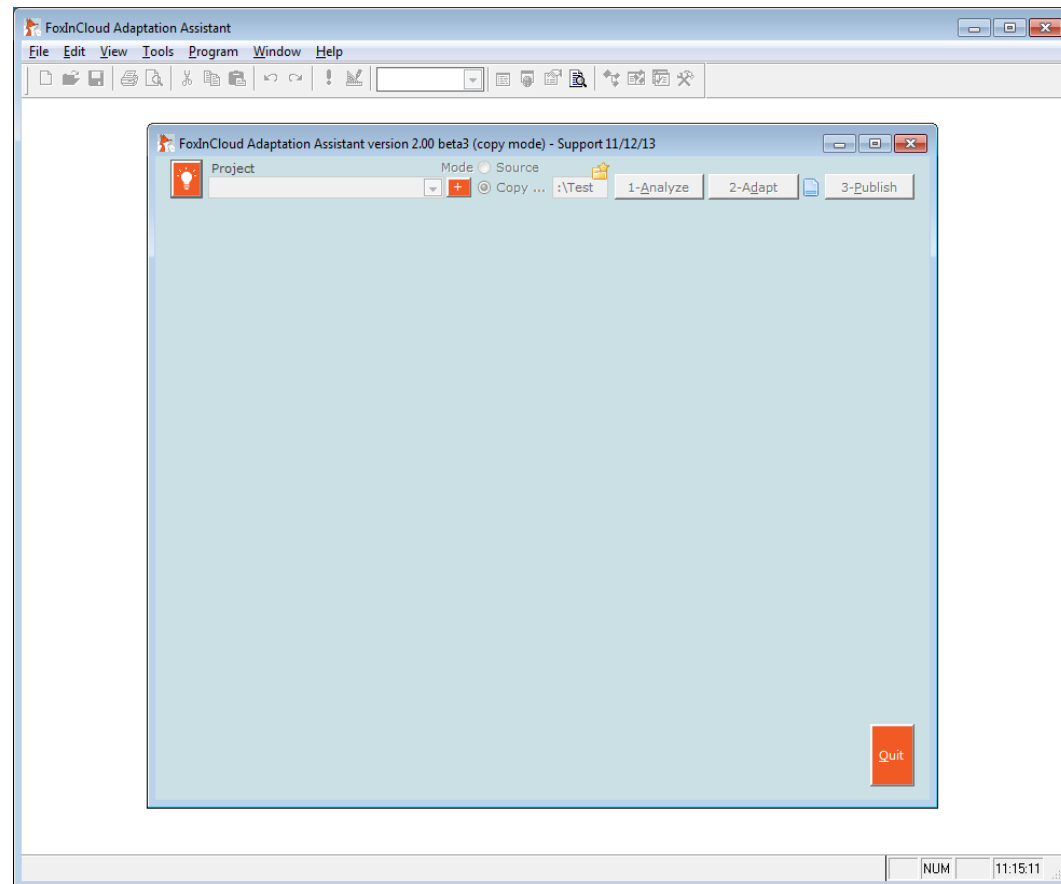
```
LOCAL oCusID, lnRecno
oCusID = Evaluate(this.grdCustomer.RecordSource + '.customer_ID') && v_customer & v_orders
IF NOT (Type('thisForm.wlPropsRestore') == 'L' AND thisForm.wlPropsRestore)
<existing code>
ENDIF
```

Estimated adaptation time: 0 minutes



Open FoxInCloud Adaptation Assistant (FAA)

FAA opens in Copy mode by default

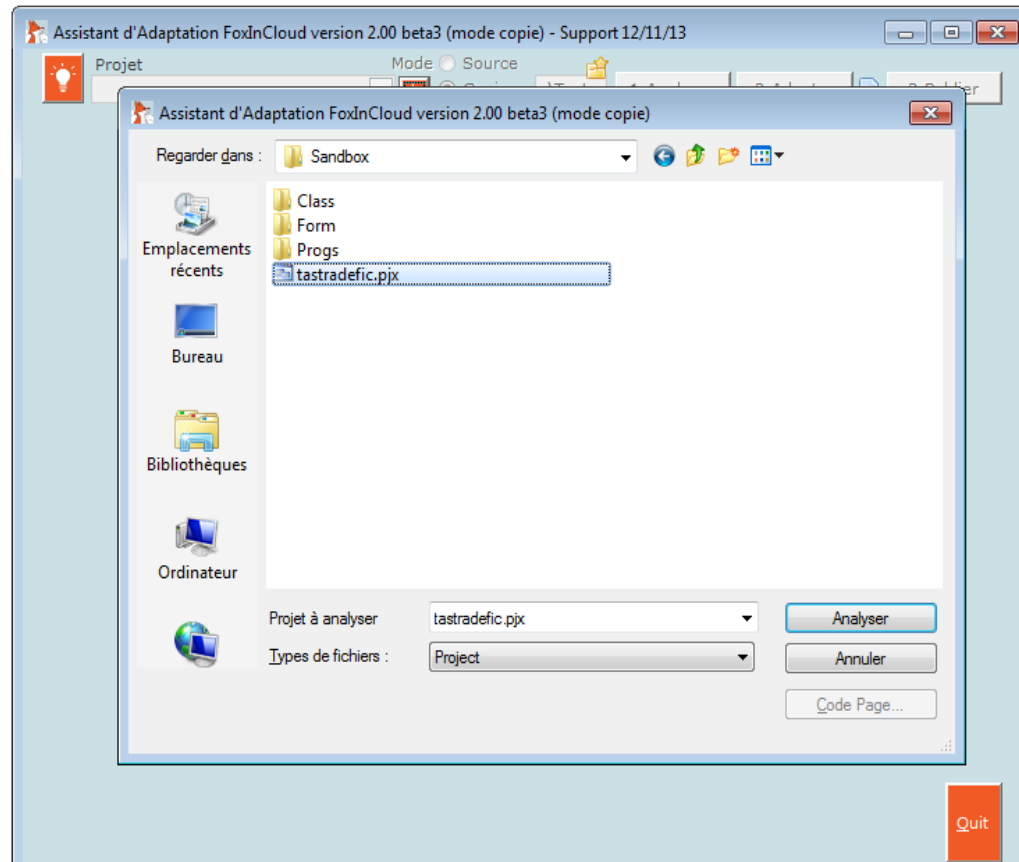




Pick the sample project in Sandbox

Samples
\\tastrade
\\Sandbox\ is
where you
can do your
tests.

Please keep
Samples
\\tastrade
_Original\
unchanged

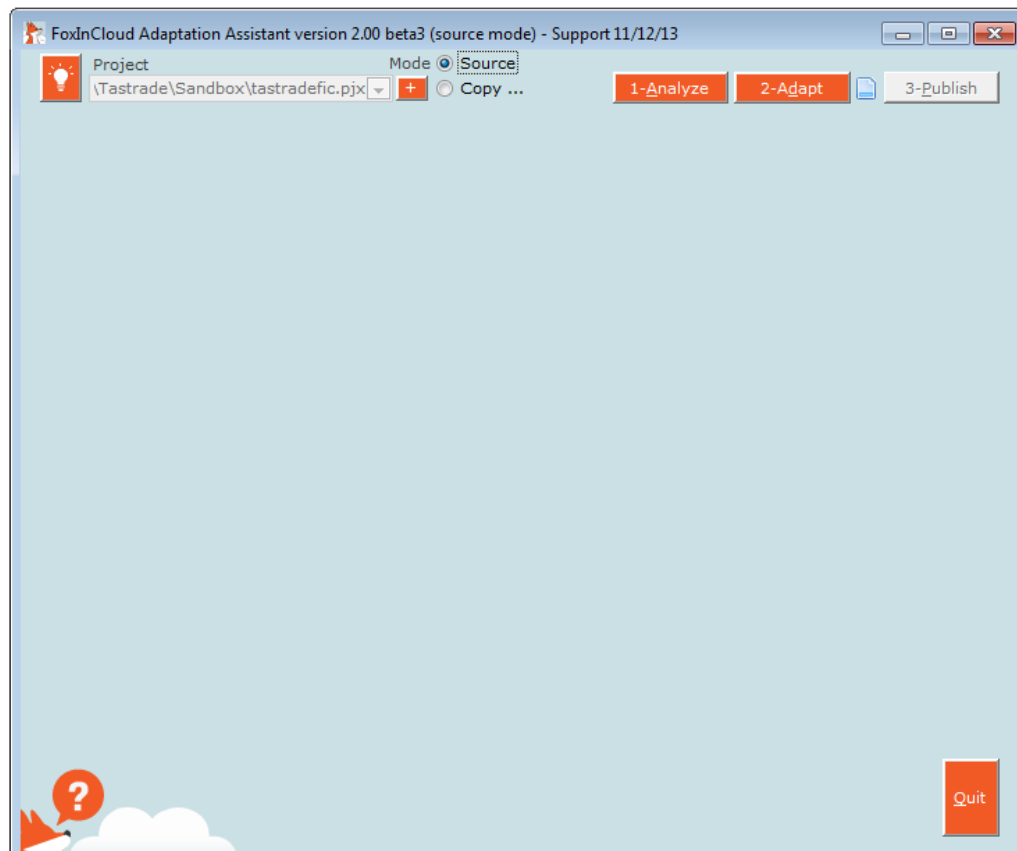




Switch to source mode

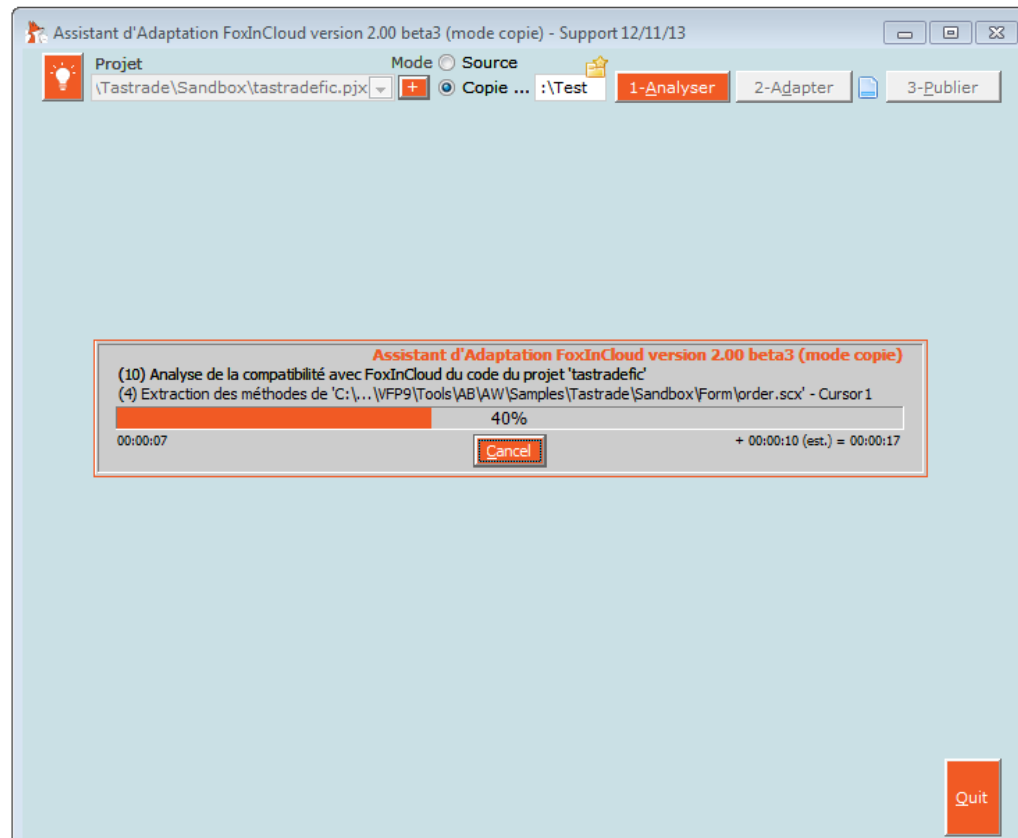
As we are working in a sandbox, we can go straight to source mode.

For a real application, running copy mode first is highly recommended





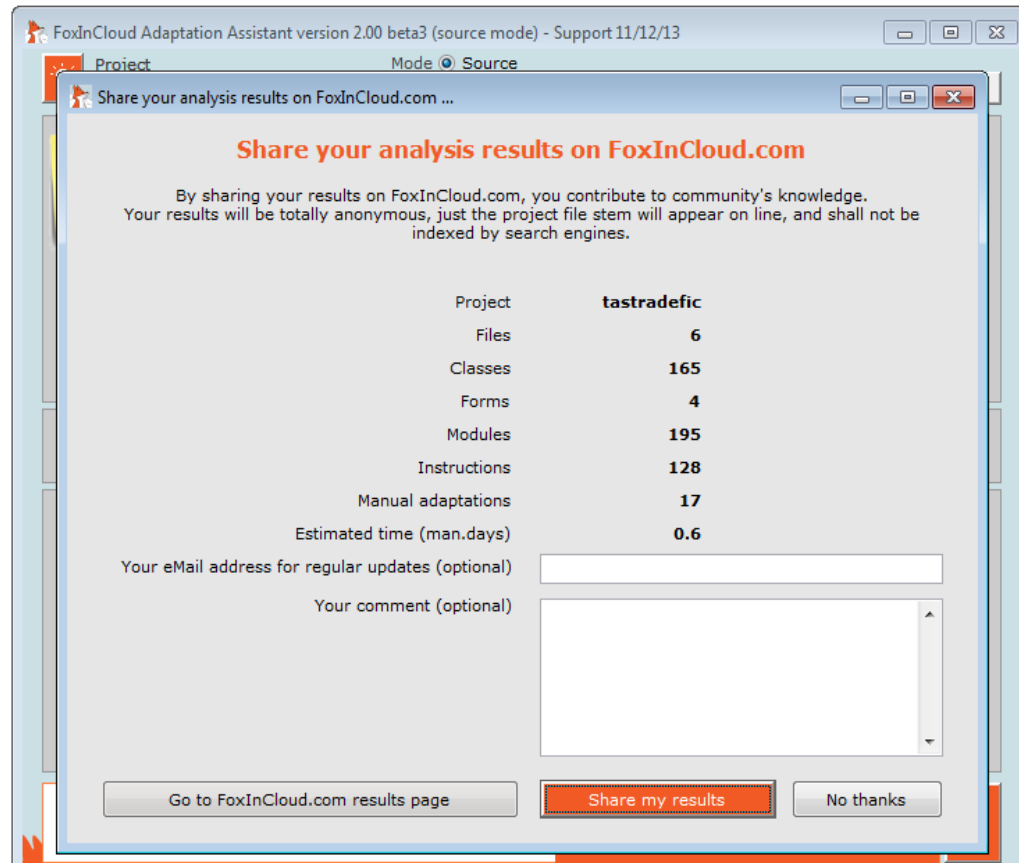
Analysing ...





Sharing analysis results

Sharing your results not only unlocks the automated adaptation features, it helps FoxInCloud know the current adaptation issues





Browsing results

For details on how to use the FAA interface, please browse foxincloud.com/how-to.php

FoxInCloud Adaptation Assistant version 2.00 beta3 (copy mode) - Support 11/12/13

Project: \Tastrade\Sandbox\tastradefic.pjx | Mode: Source | Copy ... | : \Test | 1-Analyze | 2-Adapt | 3-Publish

Filter adaptations grid ...

Object/Class	Base Class	Module	Type	Adaptation
frmcustomer	Form	Refresh	Automated adaptation	Refresh Method
customers.scx	frmcustomer	Form	Refresh	Manual adaptation after step: Query() to be
customers.scx	frmcustomer.cmdok	Commandbutton	Refresh	Manual adaptation after step: Query() to be
customers.scx	frmcustomer.grdcus	Grid	AfterRowColChange	Automated adaptation
customers.scx	frmcustomer.pgf	Pageframe	pagDetails.Init	Manual adaptation after step: BindEvent(): ad
customers.scx	frmcustomer.pgf	Pageframe	pagDetails.Init	Manual adaptation after step: BindEvent(): ad
customers.scx	frmcustomer.pgf	Pageframe	pagDetails.Init	Manual adaptation after step: BindEvent(): ad

Review... | Ignore...

All (42) | Reviewed (0) | Not reviewed (42) | All (42) | Ignored (0) | Not ignored (42)

```
C:\...\Tastrade\Sandbox\Form\customers.scx!frmcustomer (tastradefic.vcx!tasfrm) > Refresh
LOCAL cCusID, lnRecno
cCusID = Evaluate(this.grdCustomer.RecordSource + '.customer_ID') && v_customer & v_orders
view.refresh()

FoxInCloud Adaptation Assistant will condition method execution by:
IF NOT (Type('thisForm.wlPropsRestore') == 'L' AND thisForm.wlPropsRestore)
<existing code>
ENDIF
```

Estimated adaptation time: 0 minutes

6 Files	195 Modules	Manual adaptations (%) 13.28 % Estimated time 0.6 days
165 Classes	128 Instructions	
4 Forms	17 Manual adaptations	

Quit



Double clicking a grid line opens source code

```
LOCAL loCnt1
FOR EACH loCnt1 IN this.Controls FOXOBJECT
    IF InList(m.loCnt1.BaseClass, 'Textbox', 'Combobox', 'Spinner')
        * If any of the contained control's value is modified, refresh action buttons
        BindEvent(m.loCnt1, 'LostFocus', m.this.cmdCancel, 'Refresh')
        BindEvent(m.loCnt1, 'LostFocus', m.this.cmdSave, 'Refresh')
        BindEvent(m.loCnt1, 'LostFocus', m.thisForm.cmdOK, 'Refresh')

        * If any of the contained control is hovered, highlight it
        BindEvent(m.loCnt1, 'MouseEnter', m.thisForm, 'cntlMouseEnter')
        BindEvent(m.loCnt1, 'MouseLeave', m.thisForm, 'cntlMouseLeave')
    ENDIF

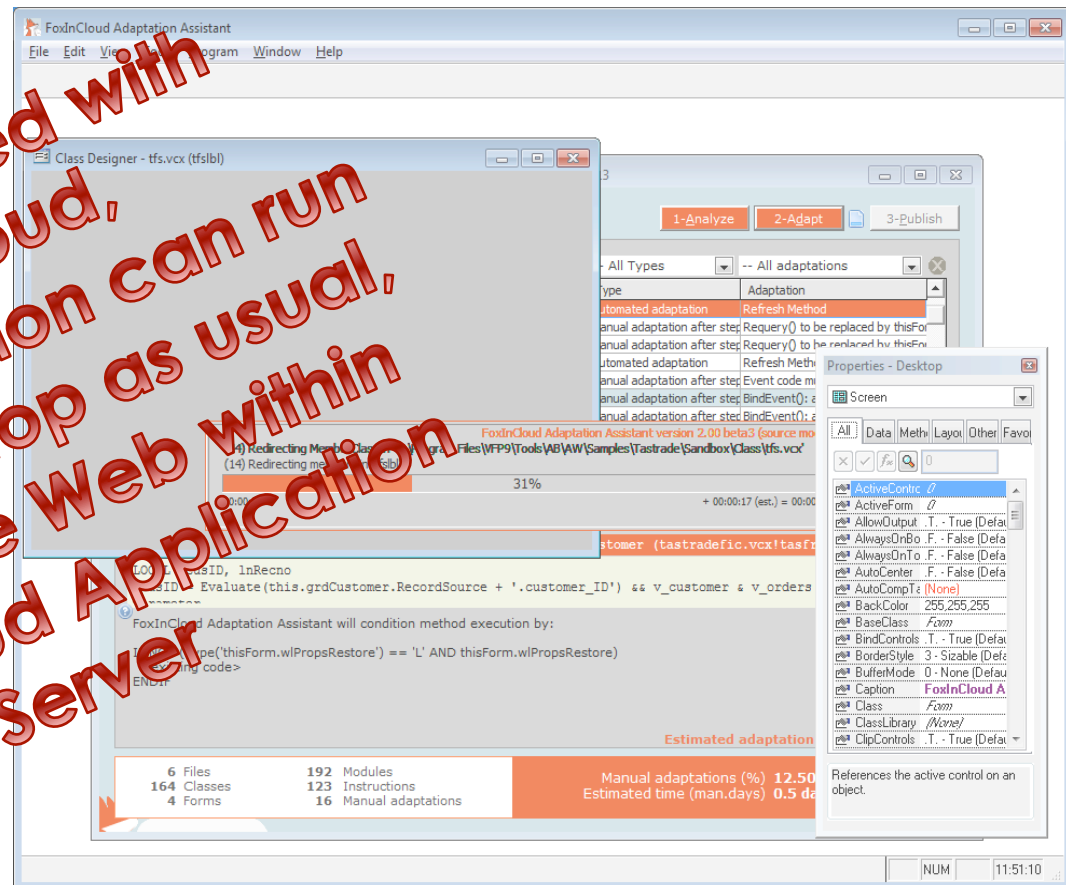
    IF InList(m.loCnt1.BaseClass, 'Combobox')
        BindEvent(m.loCnt1, 'Valid', m.this.cmdCancel, 'Refresh')
        BindEvent(m.loCnt1, 'Valid', m.this.cmdSave, 'Refresh')
        BindEvent(m.loCnt1, 'Valid', m.thisForm.cmdOK, 'Refresh')
```

Session 2, episode 2.1

Automated adaptation (FAA step 2)



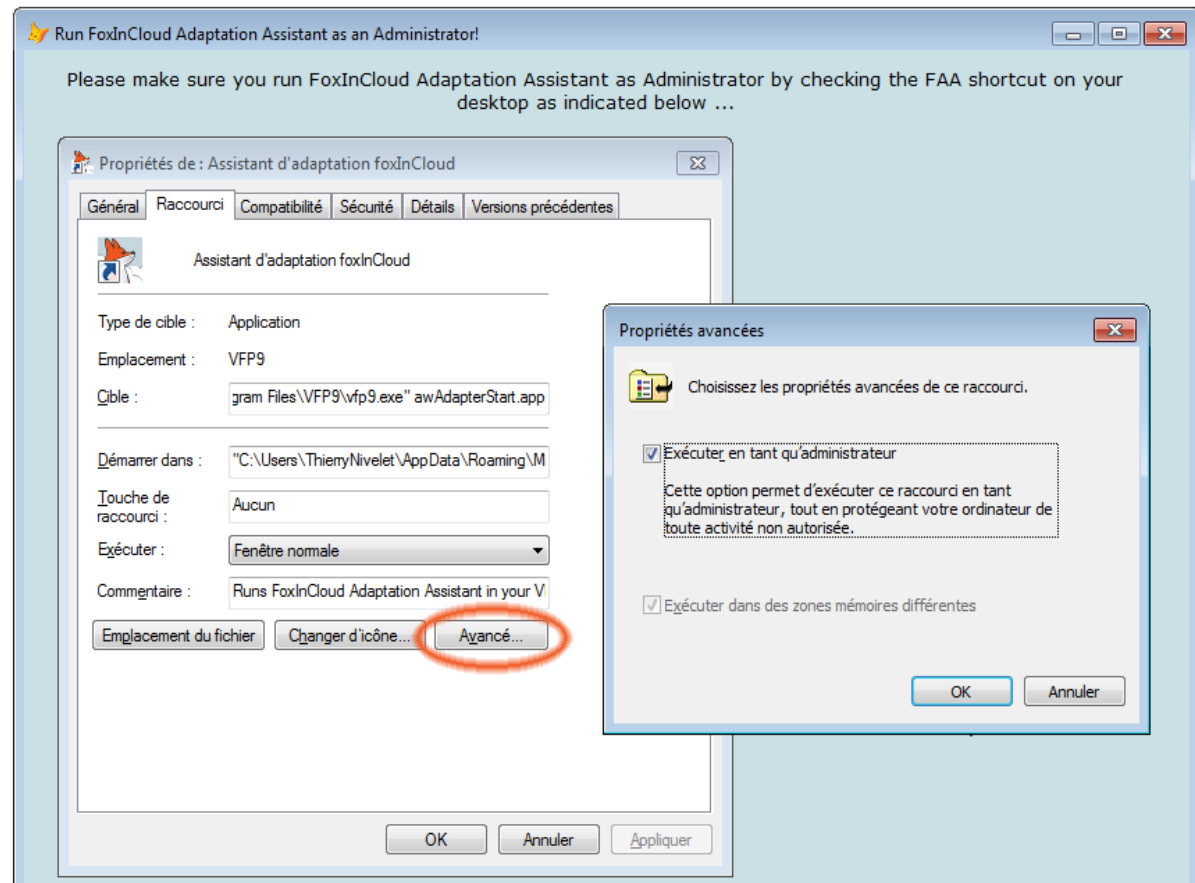
Once adapted with
FoxInCloud,
your application can run
on the desktop as usual,
and on the Web within
FoxInCloud Application
server





Let's start adaptation

As FAA needs write files into the program files directory, when using Windows >= Vista, you need to run FAA as an admin.

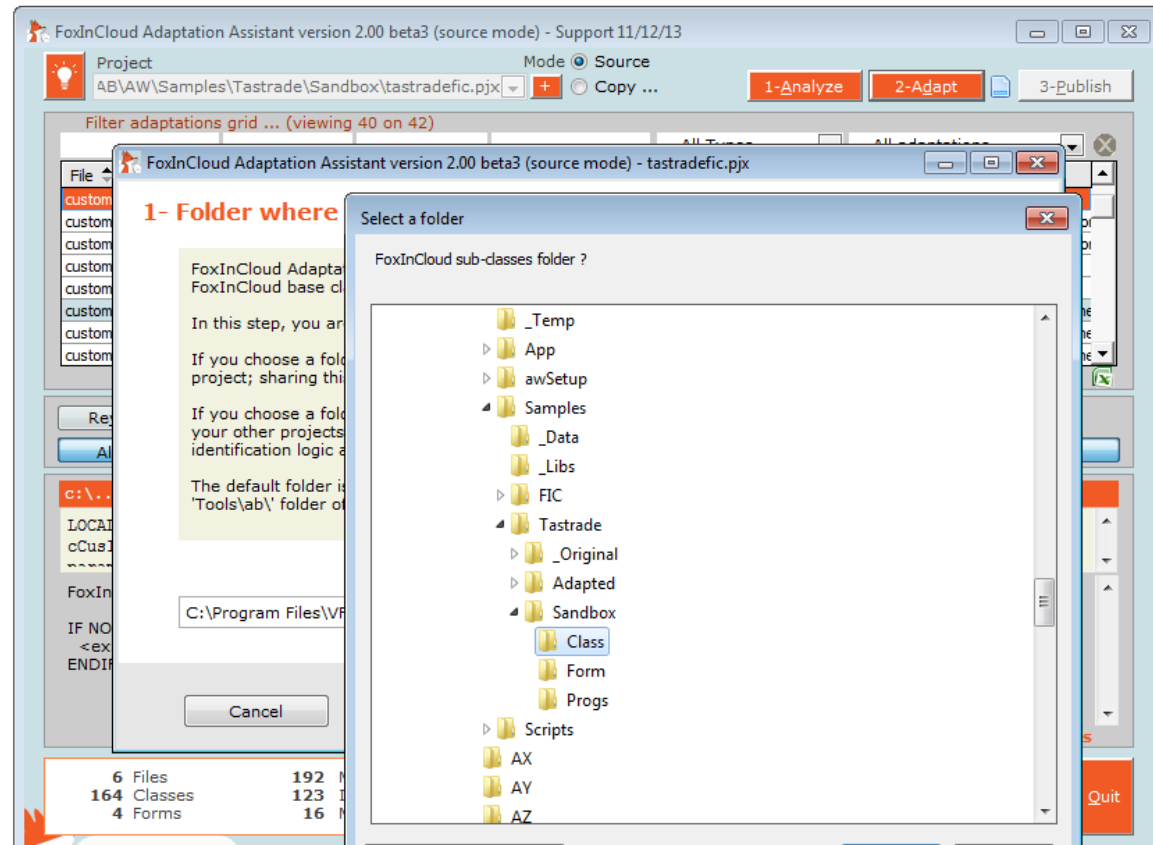




1- Folder where you want to store your sub-classes of FiC

Folder where FAA stores sub-classes of FiC 'aw' base classes.

It can be either within your project dir. or shared across projects.



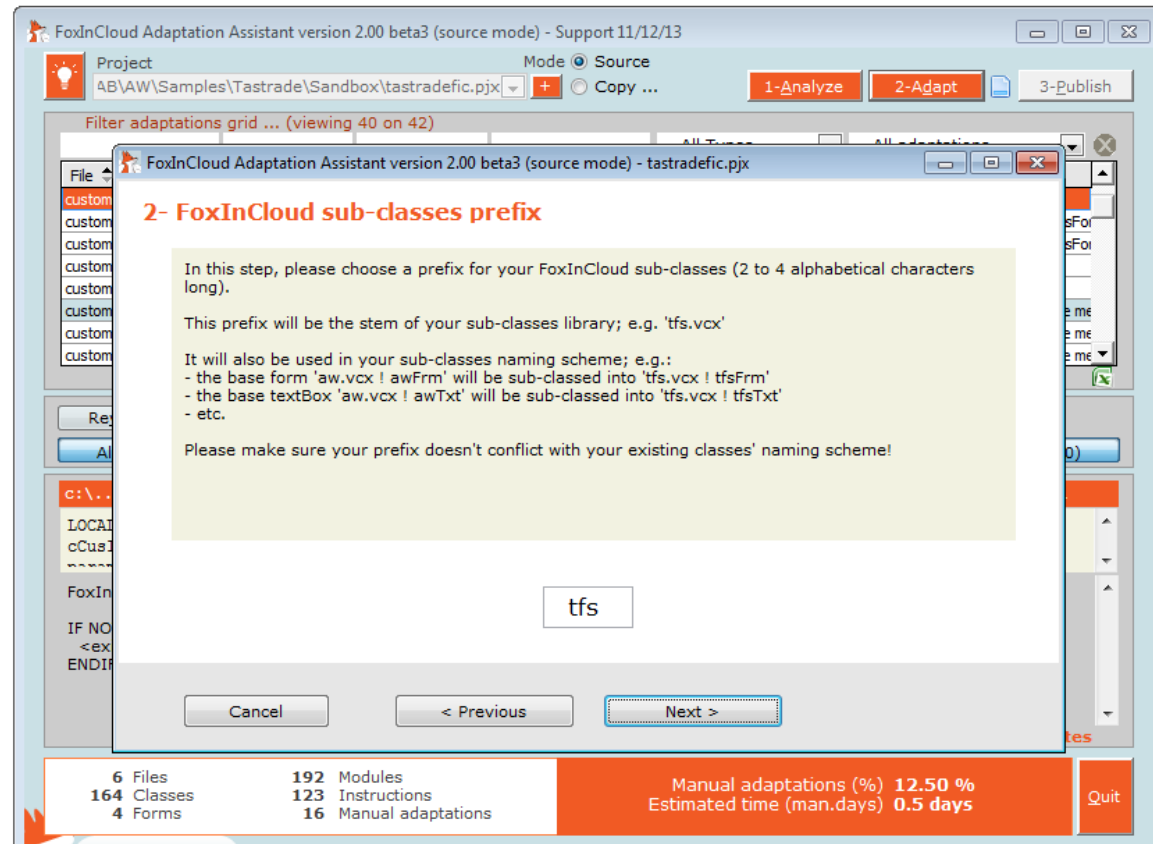


2- FiC sub-classes prefix

Your vcx and contained classes will share a common prefix.

This prefix is used throughout your web app.

(*'tfs'* stands for Tastrade FiC Sandbox)





Adapting your app ...

Automated Adaptations:

1- replace any native VFP class by your set of sub-classes

2- make your code web-compatible

Estimated adaptation	
6 Files	192 Modules
164 Classes	123 Instructions
4 Forms	16 Manual adaptations

Manual adaptations (%) 12.50
Estimated time (man.days) 0.5 da



Testing the adapted app.

After automated adaptations, FAA invites you to check that your app. works exactly the same as before.

FoxInCloud Adaptation Assistant version 2.00 beta3 (source mode) - Support 11/12/13

Project: AB\AW\Samples\Tastrade\Sandbox\tastradefic.pjx | Mode: Source | 1-Analyze | 2-Adapt | 3-Publish

Filter adaptations grid ... (viewing 23 on 25)

File	Object/Class	Base Class	Module	Type	Adaptation
customers.scx	frmcustomer	Form	Refresh	Manual adaptation after step	Requery() to be replaced by thisFo
customers.scx	frmcustomer	Form	Refresh	Manual adaptation after step	Requery() to be replaced by thisFo
customers.scx	frmcustomer.grdcu	Grid	AfterRowColChange	Manual adaptation after step	Event code must be split
customers.scx	frmcustomer.pgf	Pageframe	pagDetails.Init	Manual adaptation after step	BindEvent(): adapt the delegate me
customers.scx	frmcustomer.pgf	Pageframe	pagDetails.Init	Manual adaptation after step	BindEvent(): adapt the delegate me
customers.scx	frmcustomer.pgf	Pageframe	pagDetails.Init	Manual adaptation after step	BindEvent(): adapt the delegate me
customers.scx	frmcustomer.pgf	Pageframe	pagDetails.Init	Manual adaptation after step	BindEvent(): adapt the delegate me

Review... | Ignore... | All (23) | Reviewed (1) | Not reviewed (22) | All (25) | Ignored (2)

Do you want to open the adapted project 'C:\Program Files\VF9\Tools\AB\AW\Samples\Tastrade\Sandbox\tastradefic.pjx'?

Qui | Non

Estimated adaptation

6 Files | 192 Modules | Manual adaptations (%) 12.50
164 Classes | 123 Instructions | Estimated time (man.days) 0.4 da
4 Forms | 16 Manual adaptations

Properties - Desktop

Screen

- ActiveContic ?
- ActiveForm ?
- AllowOutput .T. - True (Defau
- AlwaysOnBo .F. - False (Defa
- AlwaysOnTo .F. - False (Defa
- AutoCenter .F. - False (Defa
- AutoCompTe (None)
- BackColor 255,255,255
- BaseClass Frm
- BindControls .T. - True (Defau
- BorderStyle 3 - Sizable (Defa
- BufferMode 0 - None (Defau
- Caption FoxInCloud A
- Class Frm
- ClassLibrary (None)
- ClipControls .T. - True (Defau

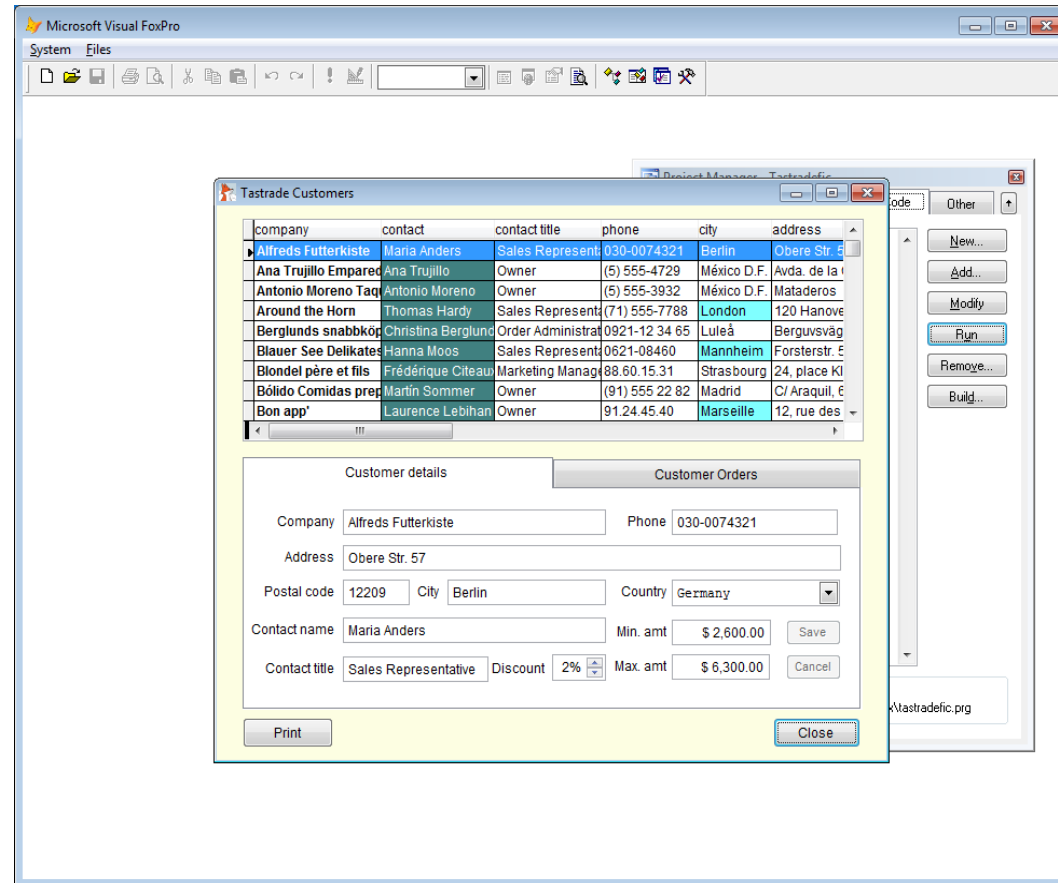
References the active control on an object



Testing the adapted app...

Once adapted with
FoxInCloud,
your application can run on
the desktop as usual,
and on the Web within
FoxInCloud Application Server

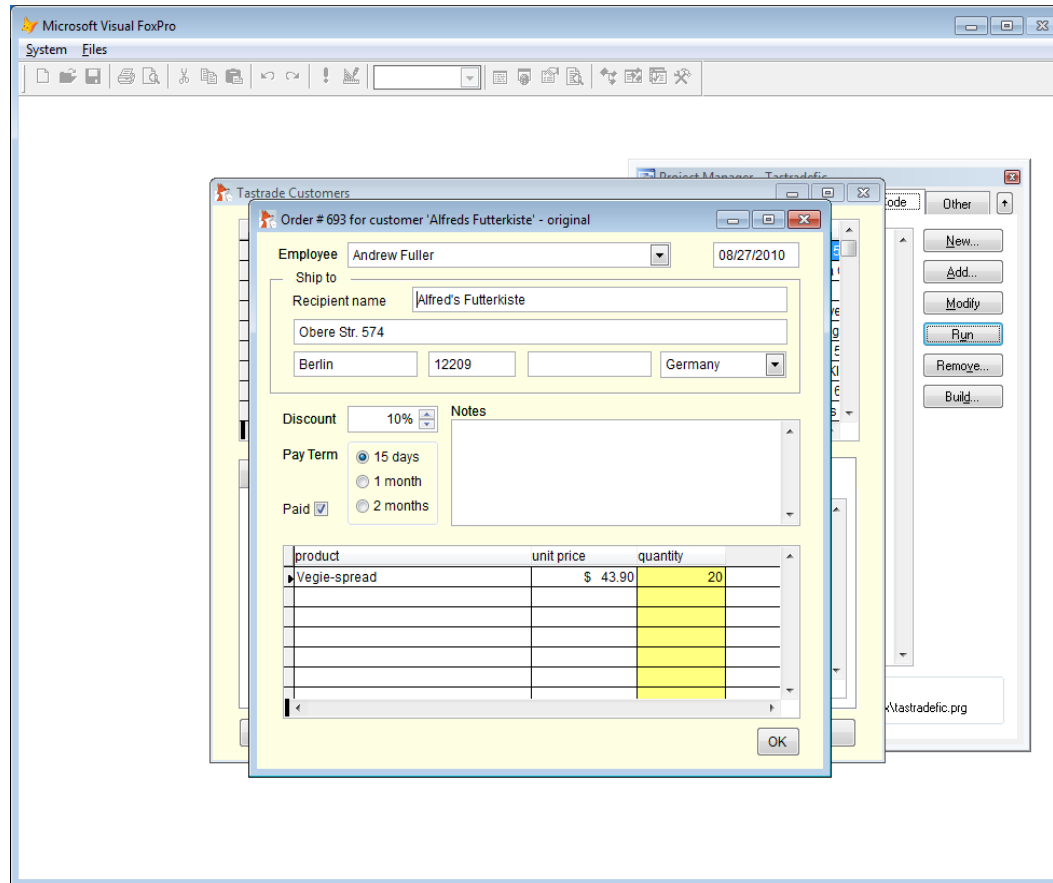
All features
of your
original
app. should
work
exactly the
same with
the
adapted
source
code





Testing the adapted app ...

You check that modal child forms and value returned to parent still work OK





Comparing source code before / after automated adaptations

Using a source code diff utility such as Win Merge helps compare code before/ after adaptation (see *.src.?cx)

```
WinMerge - [customers.scc.src - customers.scc.src]
Fichier  Edition  Affichage  Fusionner  Outils  Plugiciels  Fenêtre  Aide

Barre de localisation
C:\Program Files\VF9\Tools\AB\AW\Samples\Tasttrade_Original\Form\customers.scc.src
C:\Program Files\VF9\Tools\AB\AW\Samples\Tasttrade_Sandbox\Form\customers.scc.src

ADD OBJECT frmcustomer.grdcustomer.grcphone
Caption = "phone", ;
Name = "Header1"

ADD OBJECT frmcustomer.grdcustomer.grcphone
BorderStyle = 0, ;
Margin = 0, ;
ForeColor = RGB(0,0,0), ;
BackColor = RGB(255,255,255), ;
Name = "Text1"

ADD OBJECT pgf AS pageframe WITH ;
ErasePage = .T., ;
PageCount = 2, ;
Top = 226, ;
Left = 24, ;
Width = 576, ;
Height = 228, ;
Name = "pgf". ;

Lg:183 Col:1/72 Car:1/69 EOL:CRLF

ADD OBJECT frmcustomer.grdcustomer.grcphone.header1 AS
Caption = "phone", ;
Name = "Header1"

ADD OBJECT frmcustomer.grdcustomer.grcphone.text1 AS t
BorderStyle = 0, ;
Margin = 0, ;
ForeColor = RGB(0,0,0), ;
BackColor = RGB(255,255,255), ;
Name = "Text1"

ADD OBJECT pgf AS tfspgf WITH ;
ErasePage = .T., ;
PageCount = 2, ;
Top = 226, ;
Left = 24, ;
Width = 576, ;
Height = 228, ;
Name = "pgf". ;

Lg:188 Col:1/71 Car:1/68 EOL:CRLF

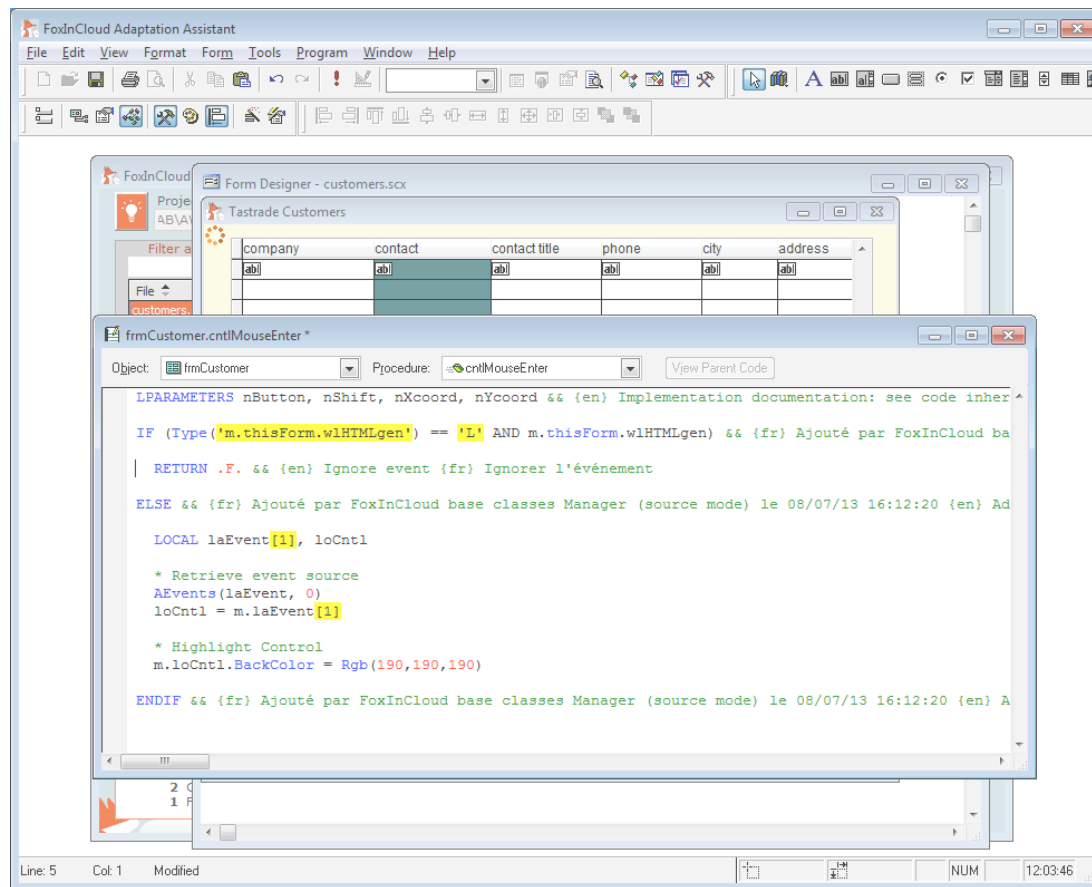
ADD OBJECT frmcustomer.grdcustomer.grcphone.text1 AS textbox WITH ;

ADD OBJECT frmcustomer.grdcustomer.grcphone.text1 AS tfstxt WITH ;

Prêt
Différence 14 de 86
NUM
```


Session 2, episode 2.2

Manual adaptations after FAA step 2





(A) Moving modal response code to a call-back method

Double-clicking an orders grid row opens the 'order' child form.

Parent form expects a Boolean response from 'order' child form.

The screenshot shows the FoxInCloud Adaptation Assistant version 2.00 beta3 in source mode. The main window displays a table of adaptations for the file 'customers.scx'. The table has columns for File, Object/Class, Base Class, Module, Type, and Adaptation. The first row is highlighted, showing 'customers.scx', 'frmcustomer.pgf.pi Grid', 'DbClick', and 'Manual adaptation after step: Modal Dialog with user response, m...'. A secondary window titled 'grdOrders.DbClick*' is open, showing the code for the DbClick procedure. The code includes comments and logic for opening a modal form and handling its response.

```
*-FIC- DO FORM order TO llResult && runs a modal form returning result
external form order
llResult = m.thisform.wForm('order.scx', .T.)
IF m.llResult

    llResult = TableUpdate(0, .T., 'v_orders')
    if not m.llResult
        TableRevert(.T., 'v_orders') && error handling could be more sophisticated ...
    endif

*-FIC- Replaced by FoxInCloud Adaptation Assistant version 2.00 beta3 (source mode)
*-FIC- MessageBox(Textmerge([Order # <<Alltrim(v_orders.Order_number)>> was saved
*-FIC- error')>>))) && simple message box without return
```



(A) Moving modal response code to a call-back method...

... if child form returns .T. user has modified current order; update base table and feedback success to user.

```
external form order
llResult = m.thisform.wForm('order.scx', .T.)
IF m.llResult
    llResult = TableUpdate(0, .T., 'v orders')
    if not m.llResult
        TableRevert(.T., 'v orders') && error handling could be more sophisticated ...
    endif
    *-FIC- Replaced by FoxInCloud Adaptation Assistant version 2.00 beta3 (source mode)
    *-FIC- MessageBox(Textmerge([Order # <<Alltrim(v_orders.Order number)>> was saved
    *-FIC- error')>>)) && simple message box without return
    thisform.wMessageBox(' ', Textmerge([Order # <<Alltrim(v_orders.Order number)>> v
    thisform.Refresh
ENDIF
ENDIF
```



(A) Moving modal response code to a call-back method...

1/ Set
.wForm()
second
parameter
as the
name of the
callback
method
where
response
code will
execute.
(relative to this
object or
absolute to the
form)

```
external form order
llResult = m.thisform.wForm('order.scx', 'wFormCallBack') && .T. replaced by 'wFormCallBack'
IF m.llResult

    llResult = TableUpdate(0, .T., 'v_orders')
    if not m.llResult
        TableRevert(.T., 'v_orders') && error handling could be more sophisticated ...
    endif

    *-FIC- Replaced by FoxInCloud Adaptation Assistant version 2.00 beta3 (source mode) on 11/12/13
    *-FIC- MessageBox(Textmerge([Order # <<Alltrim(v_orders.Order_number)>> was saved <<Iif(m.llRes
    *-FIC- error')>>])) && simple message box without return

    thisform.wMessageBox(' ', Textmerge([Order # <<Alltrim(v_orders.Order_number)>> was saved <<Iif(

    thisform.Refresh
ENDIF
ENDIF
```



(A) Moving modal response code to a call-back method...

2/ cut the response code and paste into the target call-back method.

3/ Give the parameter the same name as the variable in source method.

```
grdOrders.Db1Click
Object: grdOrders Procedure: Db1Click View Parent Code
*-FIC- Replaced by FoxInCloud Adaptation Assistant version 2.00 beta3 (source mode) on 11/12/13 11:53:20
*-FIC- DO FORM order TO llResult && runs a modal form returning result
external form order
llResult = m.thisform.wForm('order.scx', 'wFormCallBack') && , .T. replaced by 'wFormCallBack'

&& call-back code moved to this.wFormCallBack()

ENDIF

ENDIF && Added by FoxInCloud Adaptation Assistant version 2.00 beta3 (source mode) on 11/12/13 11:53:20

grdOrders.wFormCallBack
Object: grdOrders Procedure: wFormCallBack View Parent Code
LPARAMETERS llResult && @ {en} Returned from child form

&& call-back code moved from this.Db1Click()
IF m.llResult

    llResult = TableUpdate(0, .T., 'v_orders')
    if not m.llResult
        TableRevert(.T., 'v_orders') && error handling could be more sophisticated ...
    endif

    *-FIC- Replaced by FoxInCloud Adaptation Assistant version 2.00 beta3 (source mode) on 11/12/13 11:53:20
    *-FIC- MessageBox(Textmerge([Order # <<Alltrim(v_orders.Order_number)>> was saved <<Iif(m.llResult, 'succes
    *-FIC- error')>>])) && simple message box without return
    thisform.wMessageBox('!', Textmerge([Order # <<Alltrim(v_orders.Order_number)>> was saved <<Iif(m.llResult,
    thisform.Refresh
```



(B) Adapting delegate event methods

While FAA auto adapts native events, you need to adapt manually methods that are event delegates.

FoxInCloud Adaptation Assistant version 2.00 beta3 (source mode) - Support 11/12/13

Project: AB\AW\Samples\Tastrade\Sandbox\tastradefic.pjx Mode: Source

1-Analyze 2-Adapt 3-Publish

Filter adaptations grid ... (viewing 10 on 25)

File	Object/Class	Base Class	Module	Type	Adaptation
customers.scx	frmcustomer.pgf	Pageframe	pagDetails.Init	Manual adaptation after step	BindEvent(): adapt the delegate me
customers.scx	frmcustomer.pgf	Pageframe	pagDetails.Init	Manual adaptation after step	BindEvent(): adapt the delegate me
customers.scx	frmcustomer.pgf	Pageframe	pagDetails.Init	Manual adaptation after step	BindEvent(): adapt the delegate me
customers.scx	frmcustomer.pgf	Pageframe	pagDetails.Init	Manual adaptation after step	BindEvent(): adapt the delegate me
customers.scx	frmcustomer.pgf	Pageframe	pagDetails.Init	Manual adaptation after step	BindEvent(): adapt the delegate me
customers.scx	frmcustomer.pgf	Pageframe	pagDetails.Init	Manual adaptation after step	BindEvent(): adapt the delegate me
customers.scx	frmcustomer.pgf	Pageframe	pagDetails.Init	Manual adaptation after step	BindEvent(): adapt the delegate me

Reviewed on 11/12/13 11:47:13 (1) Clear Ignore...

All (10) Reviewed (1) Not reviewed (9) All (10) Ignored (0) Not ignored (10)

```
c:\...\tastrade\sandbox\form\customers.scx!frmcustomer.pgf (tfs.vcx!tfspgf) > pagDetails.Init (line 9)
BindEvent(m.loCnt1, 'LostFocus', m.this.cmdCancel, 'Refresh', 1) && manual adaptation: , 1 because
m.loCnt1.LostFocus() is not implemented
```

If this instruction delegates a user event to another method (delegate), you must adapt the delegate method as if it was the source event method itself.

To achieve that follow these steps:
1/ open the event code snippet of source event, click on 'see parent code', select the FoxInCloud aw??? class at bottom of list
2/ Copy and paste the inherited code into the delegate code snippet, before original code
3/ cut and paste original code inside the main ELSE block of inherited code
4/ follow the implementation documentation from inherited code

Estimated adaptation time: 10 minutes

2 Files 2 Modules Manual adaptations (%) 7.81 %
2 Classes 25 Instructions Estimated time (man.days) 0.2 days
1 Forms 10 Manual adaptations Quit



(B) Adapting delegate event methods...

During HTML generation, FAS implements JS events based on the value returned by VFP event methods.

Adapt delegate method as if it was the source event.

The screenshot shows the Visual FoxPro IDE. The top window is the Form Designer for 'customers.scx', displaying a table with columns: company, contact, contact title, phone, city, address. The bottom window is the code editor for 'frmCustomer.cntlMouseEnter', showing the following code:

```
LPARAMETERS nButton, nShift, nXcoord, nYcoord && {en} Implementation documentation: see code inher
IF (Type('m.thisForm.wlHTMLgen') == 'L' AND m.thisForm.wlHTMLgen) && {fr} Ajouté par FoxInCloud ba
| RETURN .F. && {en} Ignore event {fr} Ignorer l'événement
ELSE && {fr} Ajouté par FoxInCloud base classes Manager (source mode) le 08/07/13 16:12:20 {en} Ad
LOCAL laEvent[1], loCnt1
* Retrieve event source
AEvents(laEvent, 0)
loCnt1 = m.laEvent[1]
* Highlight Control
m.loCnt1.BackColor = Rgb(190,190,190)
ENDIF && {fr} Ajouté par FoxInCloud base classes Manager (source mode) le 08/07/13 16:12:20 {en} A
```



(C) Checking .RowSource assignments in code

For any combobox or listbox object or class, make sure your code (re)assigns .RowSourceType just before assigning a non-empty value to .RowSource

The screenshot shows the FoxInCloud Adaptation Assistant version 2.00 beta3 in source mode. The main window displays a table of adaptations with the following data:

File	Object/Class	Base Class	Module	Type	Adaptation
customers.scx	frmcustomer.pgf.p	Combobox		Warning	Check this.RowSourceType and this
order.scx	frmorder.cboemplo	Combobox		Warning	Check this.RowSourceType and this
order.scx	frmorder.cbocount	Combobox		Warning	Check this.RowSourceType and this

Below the table, there are buttons for 'Review...', 'Ignore...', 'All (3)', 'Reviewed (0)', 'Not reviewed (3)', 'All (3)', 'Ignored (0)', and 'Not ignored (3)'. A code sample is shown in a text area:

```
c:\...\samples\tastrade\sandbox\form\customers.scx!frmcustomer.pgf.pagdetails.cbocountry (tfs.vcx!tfscbo)
-----
Make sure you (re)set this.RowSourceType before setting this.RowSource or calling this.Requery()
Before you change this.RowSource in code and/or call this.Requery(), make sure you (re)set this.RowSourceType beforehand:
#if .f. && Start of code sample
* ...
this.RowSource = "
select ... from ... into cursor myCursor
this.RowSourceType = 2 && Alias && you need to set this.RowSourceType ...
```

Estimated adaptation time: 2 minutes

Summary statistics:

- 2 Files
- 3 Classes
- 0 Forms
- 3 Modules
- 0 Instructions
- 0 Manual adaptations

Manual adaptations (%) 0.00 %
Estimated time (man.days) 0.0 days

Buttons: Quit



(D) Replacing Requery() by thisform.wViewParmSet()

In order to restore form datasession state for each user, FAS needs to know the name and values of view parameters

Project: AB\AW\Samples\Tastrade\Sandbox\tastradefic.pjx | Mode: Source | Copy ... | 1-Analyze | 2-Adapt | 3-Publish

Filter adaptations grid ... (viewing 3 on 25)

File	Object/Class	Base Class	Module	Type	Adaptation
customers.scx	frmcustomer	Form	Refresh	Manual adaptation after step	Requery() to be replaced by thisFo
customers.scx	frmcustomer	Form	Refresh	Manual adaptation after step	Requery() to be replaced by thisFo
order.scx	frmorder.grdorder	Grid	Refresh	Manual adaptation after step	Requery() to be replaced by thisFo

frmCustomer.Refresh

Object: frmCustomer | Procedure: Refresh | View Parent Code

```
Code default() && Added by FoxInCloud Adaptation Assistant version 2.00 beta3 (source mode) on
IF NOT (Type('m.thisForm.wlPropsRestore') == 'L' AND m.thisForm.wlPropsRestore) && Added by
LOCAL cCusID, lnRecno
cCusID = Evaluate(this.grdCustomer.RecordSource + '.customer_ID') && v_customer & v_order

lnRecno = Recno('v_customer')
TableRevert(.T., 'v_customer')
Requery('v_customer')
if Between(m.lnRecno, 1, Reccount('v_customer'))
  go m.lnRecno in v_customer
endif

lnRecno = Recno('v_orders')
Requery('v_orders')
if Between(m.lnRecno, 1, Reccount('v_orders'))
  go m.lnRecno in v_orders
endif
```



(D) Replacing Requery() by thisform.wViewParmSet()...

Comment Requery() and add one call to thisform.wViewParmSet() per view parameter:

- View name
- Parm name
- Parm value
- .T. triggers requery().

```
CodeDefault() && Added by FoxInCloud Adaptation Assistant version 2.00 beta3 (source mode) on
IF NOT (Type('m.thisForm.wlPropsRestore') == 'L' AND m.thisForm.wlPropsRestore) && Added by

LOCAL cCusID, lnRecno
cCusID = Evaluate(this.grdCustomer.RecordSource + '.customer_ID') && v_customer & v_orders

lnRecno = Recno('v_customer')
TableRevert(.T., 'v_customer')

* Requery('v_customer')
thisform.wViewParmSet('v_customer', 'cCusID', m.cCusID, .T.)

if Between(m.lnRecno, 1, Reccount('v_customer'))
go m.lnRecno in v_customer
endif

lnRecno = Recno('v_orders')

* Requery('v_orders')
thisform.wViewParmSet('v_orders', 'cCusID', m.cCusID, .T.)

if Between(m.lnRecno, 1, Reccount('v_orders'))
```



(E) Splitting .*RowColChange() code into .*RowChange() / .*ColChange()

Whereas VFP fires a single event for grid row and col change, JS grids fire 2 different events.

FAS should run the right code.

FoxInCloud Adaptation Assistant version 2.00 beta3 (source mode) - Support 11/12/13

Project: AB\VAW\Samples\Tastrade\Sandbox\tastradefic.pjx | Mode: Source | Copy ... | 1-Analyze | 2-Adapt | 3-Publish

Filter adaptations grid ... (viewing 1 on 25)

File	Object/Class	Base Class	Module	Type	Adaptation
customers.scx	frmcustomer.grdcu:Grid		AfterRowColChange	Manual adaptation after step	Event code must be split

grdCustomer.AfterRowColChange

Object: grdCustomer | Procedure: AfterRowColChange | View Parent Code

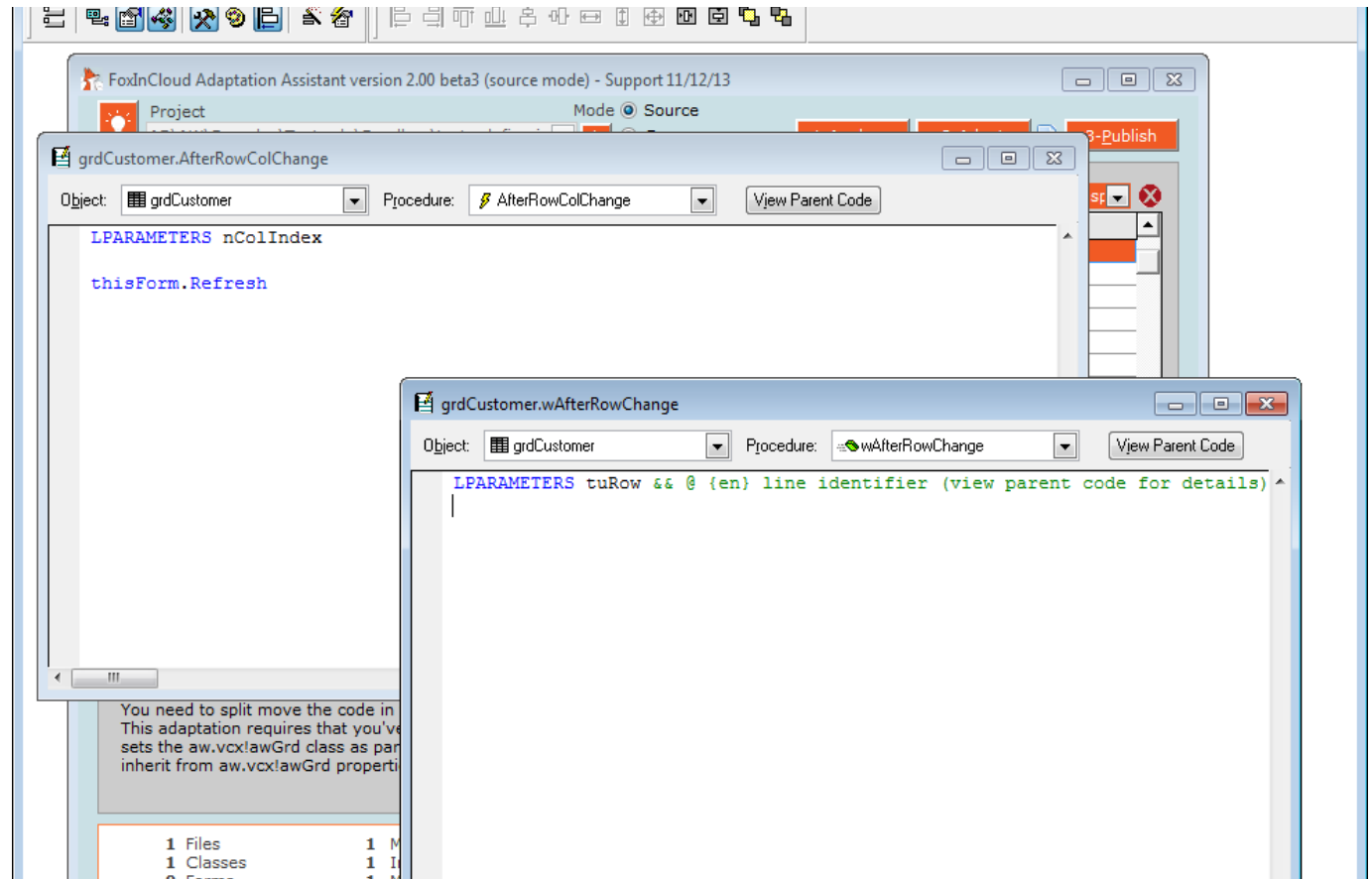
```
LPARAMETERS nColIndex  
  
thisForm.Refresh
```



(E) Splitting .*RowColChange() code to .*RowChange() / .*ColChange() ...

1/ Isolate portions of code that should run on either row or column change.

e.g., If row change, open `.wAfterRowChange()` code





(E) Splitting .*RowColChange() code to .*RowChange() / .*ColChange() ...

2/ Click 'view parent code', select `awGrd`, copy and paste inherited implementation code sample into your empty code snippet

```
awgrd.wAfterRowChange
&& {en} this block executes during HTML generation
&& RETURNed value defines how event is handled:
&& - PROCESS EVENT ON SERVER: RETURN .T. && In this case, event shall
&& - PROCESS EVENT ON CLIENT BROWSER: RETURN <javascript code>
&& - IGNORE EVENT: RETURN .F.

&& {fr} Ce bloc est exécuté pendant la génération de HTML
&& RETURN <value> ; la valeur retournée indique comment traiter l'événement
&& - TRAITER L'ÉVÉNEMENT SUR LE SERVEUR : RETURN .T. && Dans ce cas l'événement est traité
&& - TRAITER L'ÉVÉNEMENT SUR LE NAVIGATEUR CLIENT : RETURN <javascript code>
&& - IGNORER L'ÉVÉNEMENT : RETURN .F.

RETURN .T.

ELSE

IF DoDefault(@m.tuRow) && !m.tuRow.IsNew()
* {en} paste here the code that will be executed on the server
* {fr} coller ici le code qui sera exécuté sur le serveur
ENDIF

ENDIF

#endif && documentation

grdCustomer.wAfterRowChange *
Object: grdCustomer Procedure: wAfterRowChange View Parent Code
LPARAMETERS tuRow && @ {en} line identifier (view parent code for details)

IF (Type(m.thisForm.wlHTMLGen) == 'L' AND m.thisForm.wlHTMLGen)

&& {en} this block executes during HTML generation
&& RETURNed value defines how event is handled:
&& - PROCESS EVENT ON SERVER: RETURN .T. && In this case, event shall ex
&& - PROCESS EVENT ON CLIENT BROWSER: RETURN <javascript code>
&& - IGNORE EVENT: RETURN .F.

&& {fr} Ce bloc est exécuté pendant la génération de HTML
&& RETURN <value> ; la valeur retournée indique comment traiter l'événement
&& - TRAITER L'ÉVÉNEMENT SUR LE SERVEUR : RETURN .T. && Dans ce cas l'événement est traité
&& - TRAITER L'ÉVÉNEMENT SUR LE NAVIGATEUR CLIENT : RETURN <javascript code>
&& - IGNORER L'ÉVÉNEMENT : RETURN .F.

RETURN .T.
```



(E) Splitting .*RowColChange() code to .*RowChange() / .*ColChange() ...

3/ Move your source code to the location indicated

4/ Empty your original .*RowColChange() method.

The screenshot shows a development environment with several windows. The top window is titled 'FoxInCloud Adaptation Assistant version 2.00 beta3 (source mode) - Support 11/12/13'. Below it, a window titled 'grdCustomer.AfterRowColChange *' shows an empty code editor. In the foreground, a window titled 'grdCustomer.wAfterRowColChange *' displays the following code:

```
Object: [grdCustomer] Procedure: [wAfterRowColChange] View Parent Code

&& - PROCESS EVENT ON SERVER: RETURN .T. && In this case, event shall execute
&& - PROCESS EVENT ON CLIENT BROWSER: RETURN <javascript code>
&& - IGNORE EVENT: RETURN .F.

RETURN .T.

ELSE

IF DoDefault(@m.tuRow) && {en} very important {fr} très important

* {en} paste here the row change code CUT from this.AfterRowColChange()
thisForm.Refresh

ENDIF

ENDIF
```

At the bottom of the screen, a file explorer shows a tree view with '1 Files', '1 Classes', and '0 Forms'. A small text box at the bottom left of the code editor area contains the following text: 'You need to split move the code. This adaptation requires that you sets the aw.vcx!awGrd class as inherit from aw.vcx!awGrd class.'



(F) Reporting

Because VFP reporting involves Windows resources, you need a different **REPORT** code in desktop mode and Web mode.

The screenshot shows the FoxInCloud Adaptation Assistant version 2.00 beta3 (source mode) - Support 11/12/13. The main window displays a table of adaptations with the following data:

File	Object/Class	Base Class	Module	Type	Adaptation
customers.scx	frmcustomer.cmdpr	Commandbutton	Click	Manual adaptation after step	REPORT FORM in Web mode

Below the table, a code editor window titled 'cmdPrint.Click' is open, showing the following code:

```
#if .f. && {en} ===== Implementation documentation ===== {en}

Value returned indicates to FoxInCloud Application Server how browser should handle this e
RETURN .T. && EXECUTE THIS VFP EVENT CODE (on FoxInCloud server)
RETURN <JavaScript code> && EXECUTE THIS JAVASCRIPT CODE (run in browser only, don't not
RETURN .F. && IGNORE EVENT

For more details and options, see code inherited from aw*

#endif && {en} ===== / Implementation documentation ===== {en}

RETURN .T.&& Process event on server (ELSE block code)

ELSE && Added by FoxInCloud Adaptation Assistant version 2.00 beta3 (source mode) on 11/12/13

local customerID
customerID = Trim(customer.Customer ID)
report form customer for Customer_ID = m.customerID preview && runs in a private datasession
```



(F) Reporting...

1/ Create 2 blocks of code, one for desktop mode, one for web mode.

To test desktop or web mode, you can use `wlWeb()` or `wlLAN()` (in `awPublic.prg`), or `thisForm.wlWeb`

FoxInCloud Adaptation Assistant version 2.00 beta3 (source mode) - Support 11/12/13

Project: AB\VAW\Samples\Tastrade\Sandbox\tastradefic.pjx | Mode: Source | Copy ... | 1-Analyze | 2-Adapt | 3-Publish

Filter adaptations grid ... (viewing 1 on 25)

File	Object/Class	Base Class	Module	Type	Adaptation
customers.scx	frmcustomer.cmdpr	Commandbutton	Click	Manual adaptation after step	REPORT FORM in Web mode

cmdPrint.Click*

Object: cmdPrint | Procedure: Click | View Parent Code

```
For more details and options, see code inherited from aw*
#endif && {en} ===== / Implementation documentation ===== {en}

RETURN .T.&& Process event on server (ELSE block code)

ELSE && Added by FoxInCloud Adaptation Assistant version 2.00 beta3 (source mode) on 11/12/13

local customerID
customerID = Trim(customer.Customer_ID)

if wlLAN()
report form customer for Customer_ID = m.customerID preview && runs in a private datasessi
else
endif

ENDIF && Added by FoxInCloud Adaptation Assistant version 2.00 beta3 (source mode) on 11/12/13
```




(F) Reporting...

2/ In Web mode,
`REPORT FORM`
... to a PDF
file using the
PDF
generator of
your choice.

3/ Send back
the PDF to
the browser
using
`thisForm.wFileSaveAs()`

The screenshot shows the FoxInCloud Adaptation Assistant version 2.00 beta3 (source mode) - Support 11/12/13. The interface includes a project selection dropdown, a mode selector (Source), and buttons for '1-Analyze', '2-Adapt', and '3-Publish'. A table titled 'Filter adaptations grid ... (viewing 1 on 25)' is visible, with the following content:

File	Object/Class	Base Class	Module	Type	Adaptation
customers.scx	frmcustomer.cmdpr	Commandbutton	Click	Manual adaptation after step	REPORT FORM in Web mode

Below the table, a code editor window titled 'cmdPrint.Click*' shows the following code:

```
local customerID
customerID = Trim(customer.Customer_ID)

if wLAN() && desktop mode

    report form customer for Customer_ID = m.customerID preview && runs in a private datasession

else && Web mode

    local lcFileOut, success, result
    lcFileOut = Textmerge({<<Addbs(Sys(2023))>>customer <<m.customerID>>.pdf}) && into current VFP temp
    report form customer for Customer_ID = m.customerID object type 10 to file (m.lcFileOut) && invokes
    success = thisForm.wFileSaveAs(m.lcFileOut, @m.result) && delivers the file to the user
    if !m.success
        thisForm.wMessageBox(m.result)
    endif

endif

ENDIF && Added by FoxInCloud Adaptation Assistant version 2.00 beta3 (source mode) on 11/12/13 11:53:14
```



Testing the adapted application

Once adapted with
FoxInCloud,
your application can run on
the desktop as usual,
and on the Web within
FoxInCloud Application Server

Just like you did after automated adaptations, run your application and make sure every feature works exactly the same as before ...

The screenshot displays a web application window titled 'Tastrade Customers'. It features a table with columns for company, contact, contact title, phone, city, and address. Below the table, there are two tabs: 'Customer details' and 'Customer Orders'. The 'Customer details' tab is active, showing a form with fields for Company, Address, Postal code, City, Country, Contact name, Contact title, Discount, Min. amt, and Max. amt. A 'Run' button is visible in the right-hand pane of the application.

company	contact	contact title	phone	city	address
Alfreds Futterkiste	Maria Anders	Sales Represent	030-0074321	Berlin	Obere Str. 5
Ana Trujillo Empared	Ana Trujillo	Owner	(5) 555-4729	México D.F.	Avda. de la
Antonio Moreno Taq	Antonio Moreno	Owner	(5) 555-3932	México D.F.	Mataderos
Around the Horn	Thomas Hardy	Sales Represent	(71) 555-7788	London	120 Hanove
Berglunds snabbköp	Christina Berglund	Order Administrat	0921-12 34 65	Luleå	Berguvsväg
Blauer See Delikates	Hanna Moos	Sales Represent	0621-08460	Mannheim	Forsterstr. 5
Blondel père et fils	Frédérique Citeau	Marketing Manag	88.60.15.31	Strasbourg	24, place Kl
Bólide Comidas prep	Martín Sommer	Owner	(91) 555 22 82	Madrid	C/ Araquil, 6
Bon app'	Laurence Lebihan	Owner	91.24.45.40	Marseille	12, rue des

Customer details

Company: Alfreds Futterkiste Phone: 030-0074321

Address: Obere Str. 57

Postal code: 12209 City: Berlin Country: Germany

Contact name: Maria Anders Min. amt: \$ 2,600.00 Save

Contact title: Sales Representative Discount: 2% Max. amt: \$ 6,300.00 Cancel

Print Close



Manual adaptations after step 2 completed!

If you ignore each adaptation once done, or re-analyse your project, your adaptation count and time comes down to 0!

FoxInCloud Adaptation Assistant version 2.00 beta3 (source mode) - Support 11/12/13

Project: AB\AW\Samples\Tastrate\Sandbox\tastradefic.pjx | Mode: Source | Copy ... | 1-Analyze | 2-Adapt | 3-Publish

Filter adaptations grid ... (viewing 0 on 21)

File	Object/Class	Base Class	Module	Type	Adaptation

Review... | Ignore... | All (0) | Reviewed (0) | Not reviewed (0) | All (21) | Ignored (21) | Not ignored (0)

Estimated adaptation time: 0 minutes

5 Files | 162 Classes | 4 Forms | 187 Modules | 195 Instructions | 0 Manual adaptations | Manual adaptations (%) 0.00 % | Estimated time (man.days) 0.0 days | Quit



Remind of Manual Adaptations after step 3...

Keep in mind that you'll have a few more adaptations to review after next step (3-Publish) is complete!

Project: \\Tools\AB\AW\Samples\Tastrade\Sandbox\tastradefic.pjx

Mode: Source Copy ...

1-Analyze 2-Adapt 3-Publish

Filter adaptations grid ... (viewing 7 on 26)

File	Object/Class	Base Class	Module	Type	Adaptation
tastradefic.prg			tastradefic	Manual adaptation after step 3-Publish	Full Path
tastradefic.prg			tastradefic	Manual adaptation after step 3-Publish	SET to execute at application st
tastradefic.prg			tastradefic	Manual adaptation after step 3-Publish	SET to execute at application st
tastradefic.prg			tastradefic	Manual adaptation after step 3-Publish	SET to execute at application st
tastradefic.prg			tastradefic	Manual adaptation after step 3-Publish	SET to execute at application st
tastradefic.prg			tastradefic	Manual adaptation after step 3-Publish	DO FORM <app main form >
tastradefic.prg			tastradefic	Manual adaptation after step 3-Publish	SET to execute at application st

Review... Ignore...

All (7) Reviewed (0) Not reviewed (7) All (26) Ignored (19) Not ignored (7)

```
c:\program files\vfp9\tools\ab\aw\samples\tastrade\sandbox\tastradefic.prg > tastradefic (line 5)
SET CLASSLIB TO 'C:\Program Files\VFP9\Tools\AB\AW\Samples\Tastrade\Sandbox\Class\tfs.vcx' ADDITIVE
```

If file is read-only, remove path form code and it to set('PATH') in application environment class or program (see xxxSets.prg after step 3 - publish).
If file is read/write, add path to application configuration class (see xxxServer.prg\xxxAppConfig after step 3 - publish)

Estimated adaptation time: 0 minutes

6 Files 188 Modules
162 Classes 215 Instructions
4 Forms 0 Manual adaptations

Manual adaptations (%) 0.00 %
Estimated time (man.days) 0.0 days

Quit



FoxInCloud

A-Z tutorial, Session 3

Requires FAA & FAS V2.0+

Session 3

Publishing your application on localhost

To better follow this session, we recommend you download and install both FoxInCloud Adaptation Assistant (FAA) and FoxInCloud Application Server (FAS) version 2.0+ from <http://foxincloud.com/download.php>

Both licensed and trial versions of FoxInCloud Application Server install the application presented in this Session in this location:
<path to VFP9>\Tools\AB\AW\Samples\Tastrade\

To reproduce the steps presented in this session, please follow session 2 beforehand.

You may also read adapted source code from ...\Tastrade\Adapted\

Publishing your application on localhost, Agenda



Episode	Subject	Slides
1	Automated publication (FAA step 3)	16
2	Manual adaptations after FAA step 3	17
3	Getting prepared for production	8
		41

Session 3, episode 1

Automated publication (FAA step 3)





Click FAA's Publish button

Clicking the publish button starts the automated installation of your web application in <http://localhost/> using IIS

FoxInCloud Adaptation Assistant version 2.00 beta3 (874 x 586)

Project: J:\Tools\AB\AW\Samples\Tastrade\Sandbox\tastradefic.pjx | Mode: Source | Copy ... | 1-Analyze | 2-Adapt | 3-Publish

Filter adaptations grid ... (viewing 7 on 26)

File	Object/Class	Base Class	Module	Type	Adaptation
tastradefic.prg			tastradefic	Manual adaptation after step 3-Publish	Full Path
tastradefic.prg			tastradefic	Manual adaptation after step 3-Publish	SET to execute at application st
tastradefic.prg			tastradefic	Manual adaptation after step 3-Publish	SET to execute at application st
tastradefic.prg			tastradefic	Manual adaptation after step 3-Publish	SET to execute at application st
tastradefic.prg			tastradefic	Manual adaptation after step 3-Publish	SET to execute at application st
tastradefic.prg			tastradefic	Manual adaptation after step 3-Publish	DO FORM <app main form >
tastradefic.prg			tastradefic	Manual adaptation after step 3-Publish	SET to execute at application st

Review... | Ignore... | All (7) | Reviewed (0) | Not reviewed (7) | All (26) | Ignored (19) | Not ignored (7)

```
c:\program files\vp9\tools\ab\aw\samples\tastrade\sandbox\tastradefic.prg > tastradefic (line 5)
SET CLASSLIB TO 'C:\Program Files\VP9\Tools\AB\AW\Samples\Tastrade\Sandbox\Class\tfs.vcx' ADDITIVE
```

If file is read-only, remove path from code and it to set('PATH') in application environment class or program (see xxxSets.prg after step 3 - publish).
If file is read/write, add path to application configuration class (see xxxServer.prg\xxxAppConfig after step 3 - publish)

Estimated adaptation time: 0 minutes

6 Files	188 Modules	Manual adaptations (%)	0.00 %
162 Classes	215 Instructions	Estimated time (man.days)	0.0 days
4 Forms	0 Manual adaptations		

Quit



1/ Checking your IIS installation

FAA makes sure your dev. machine has a proper version of IIS installed.

FoxInCloud Adaptation Assistant version 2.00 beta3 (source mode) - Support 11/12/13

Project: \Tools\AB\AW\Samples\Tastrade\Sandbox\tastradefic.pjx Mode: Source

1-Analyze 2-Adapt 3-Publish

Filter adaptations grid ... (viewing 0 on 26)

1 - Install Internet Information Services (IIS) on this computer

Congratulations, your computer runs IIS version 7.5!

In case you have a default IIS installation, you need to check it as some features necessary to FoxInCloud may be missing.

Please perform this verification by clicking the image to the right; this will open the suitable page on the West-Wind Technologies web site for you to check your IIS installation.

After this check, you can continue to the next step ...

Windows Features

Turn Windows features on or off

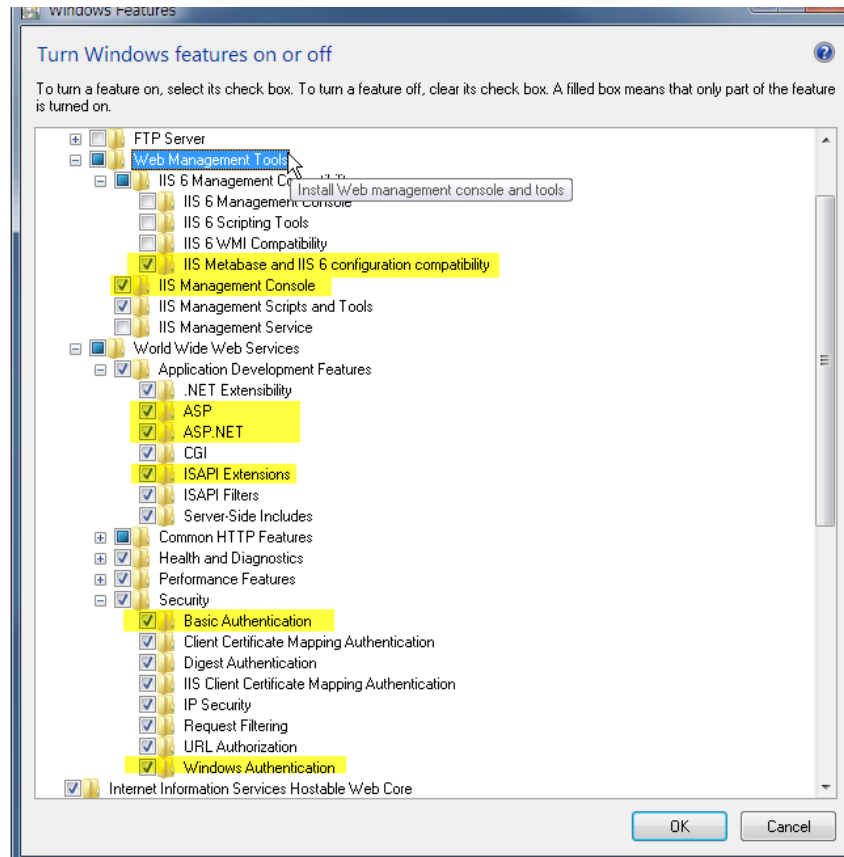
To turn a feature on, select its check box. To turn a feature off, clear its check box. A filled icon is turned on.

- FTP Server
- Web Management Tools
 - Install Web management console and tools
- IIS 6 Management Console
 - IIS 6 Management Console
 - IIS 6 Scripting Tools
 - IIS 6 WMI Compatibility
 - IIS Metabase and IIS 6 configuration compatibility
 - IIS Management Console
 - IIS Management Scripts and Tools
 - IIS Management Service
- World Wide Web Services
 - Application Development Features
 - .NET Extensibility
 - ASP
 - ASP.NET
 - CGI
 - ISAPI Extensions
 - ISAPI Filters
 - Server-Side Includes



1/ Checking your IIS installation...

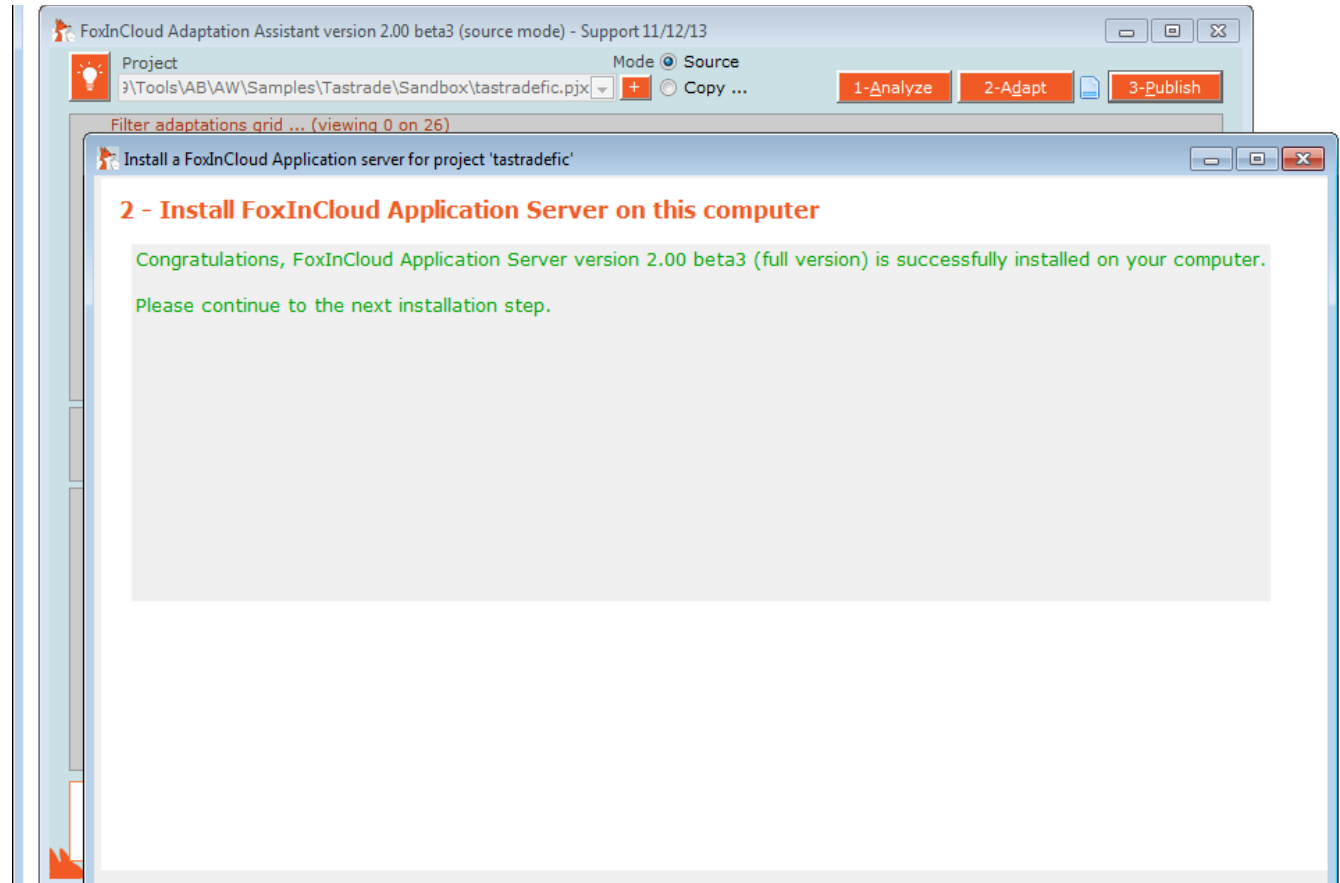
If your machine runs IIS >= 7, you're invited to manually check that all the necessary IIS options are installed.





2/ Checking your FAS installation

FAA checks FoxInCloud Application Server is installed on your machine; if not, get a free download using the form displayed .





3/ Installing FoxInCloud's *.js and *.css

FAA
creates the
awScripts
/ virtual
directory in
localhost
where all
your Web
apps can
access
FoxInCloud
standard
*.js and
*.css





3/ Installing FoxInCloud's *.js and *.css ...

When this step is completed successfully, clicking the image in FAA opens the same image in your default Web browser

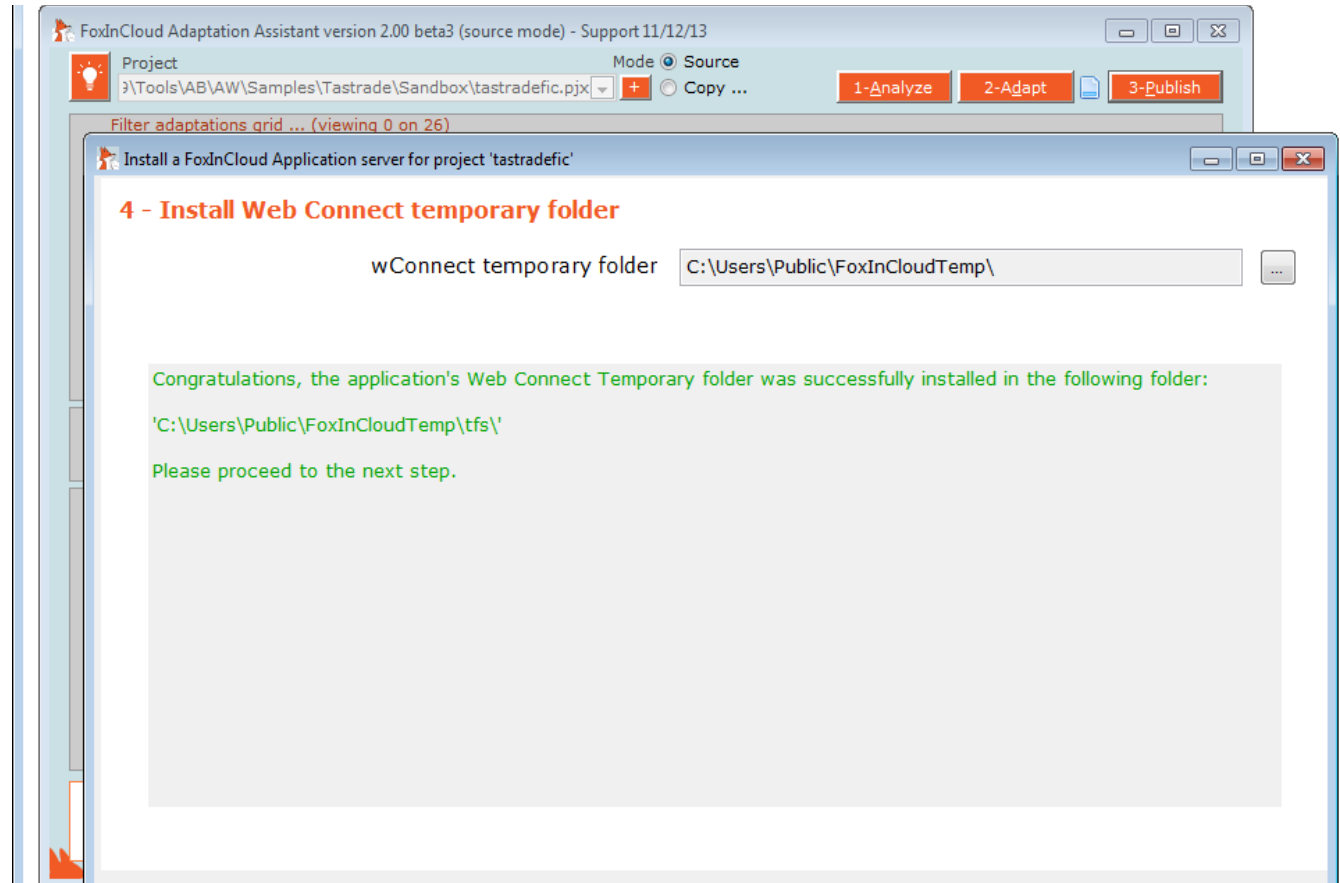




4/ Installing Web Connect Temp folder

wConnect stores requests, responses and text logs into a Temp folder.

By default, FAA installs this folder in a public area where IIS anonymous user has full rights.

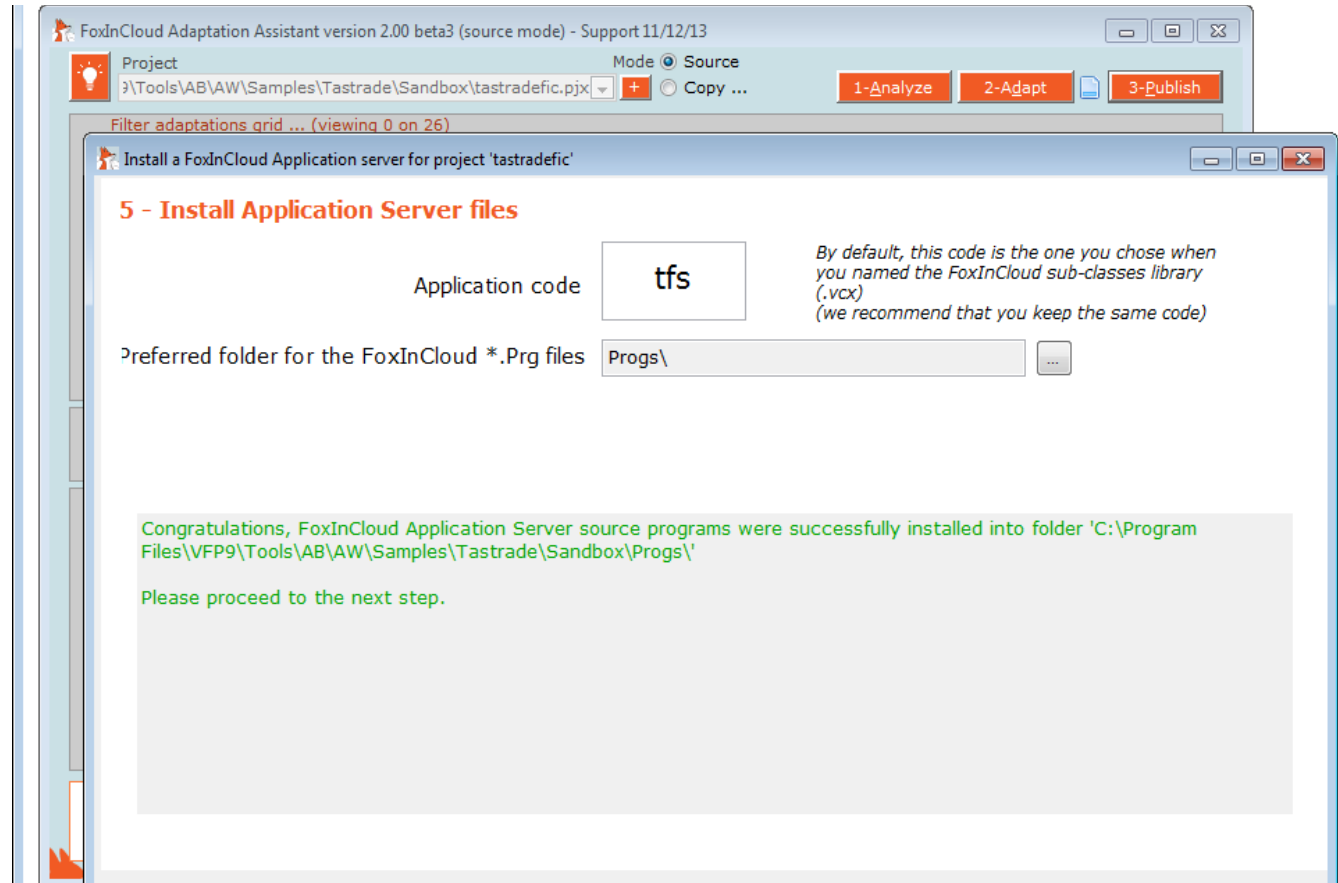




5/ Installing your FoxInCloud Application Server files

Application code prefixes your FAS sub-class names, and serve as default URL extension;

using the suggested app code is recommended

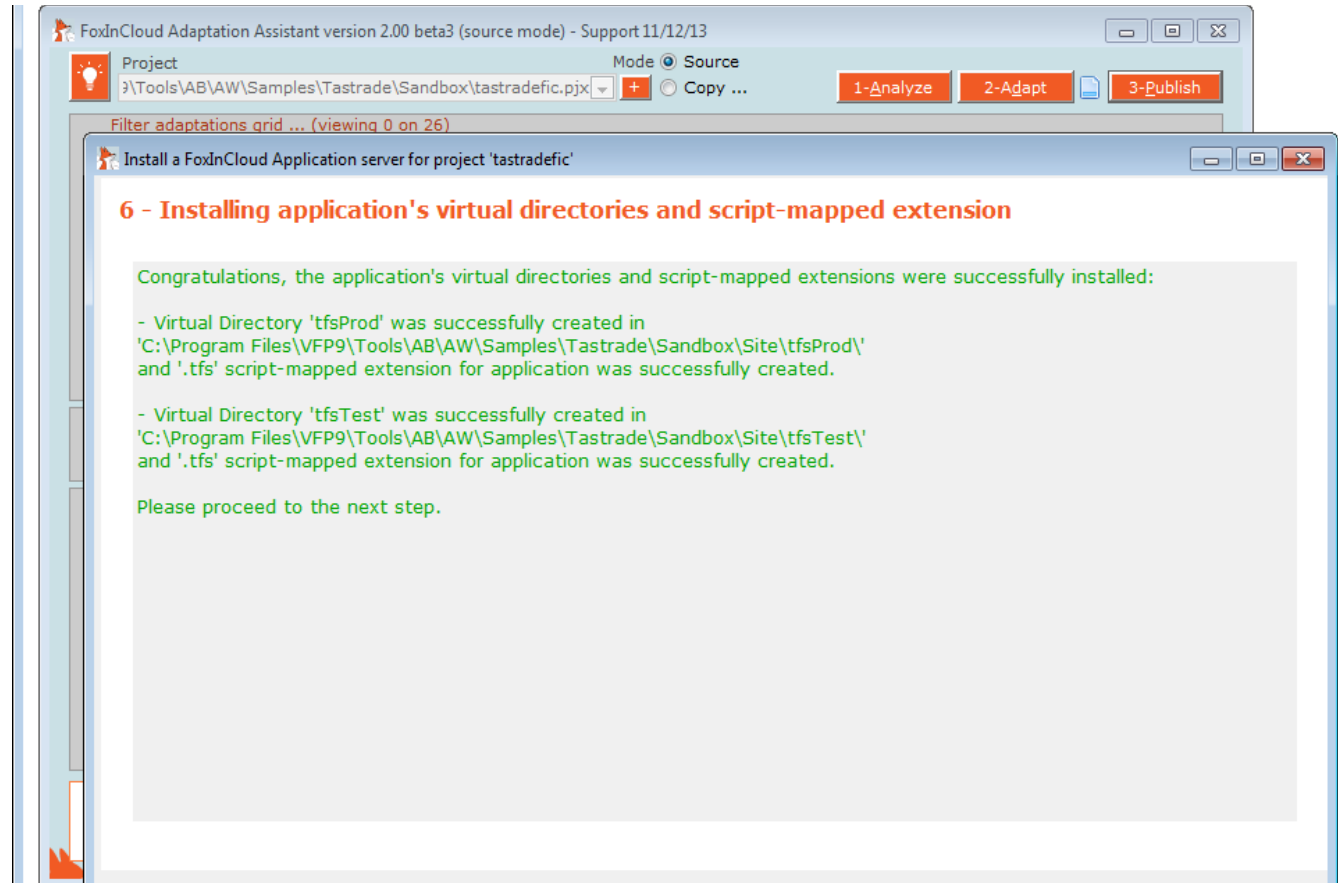




6/ Installing app virtual directories

FAA installs 2 virtual dirs., one for test and one for production.

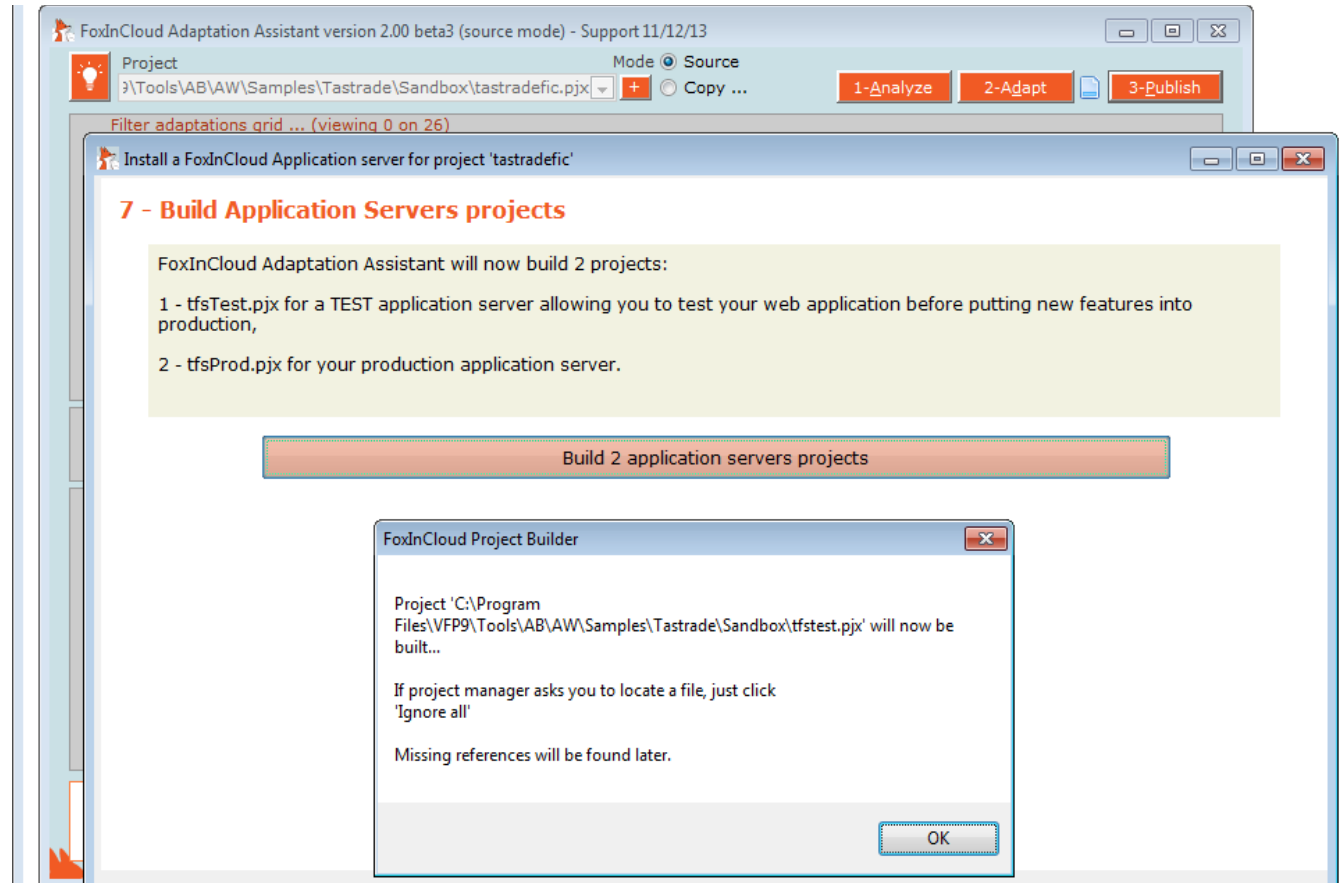
Both your site and projects are split into test and prod.





7/ Building application server projects

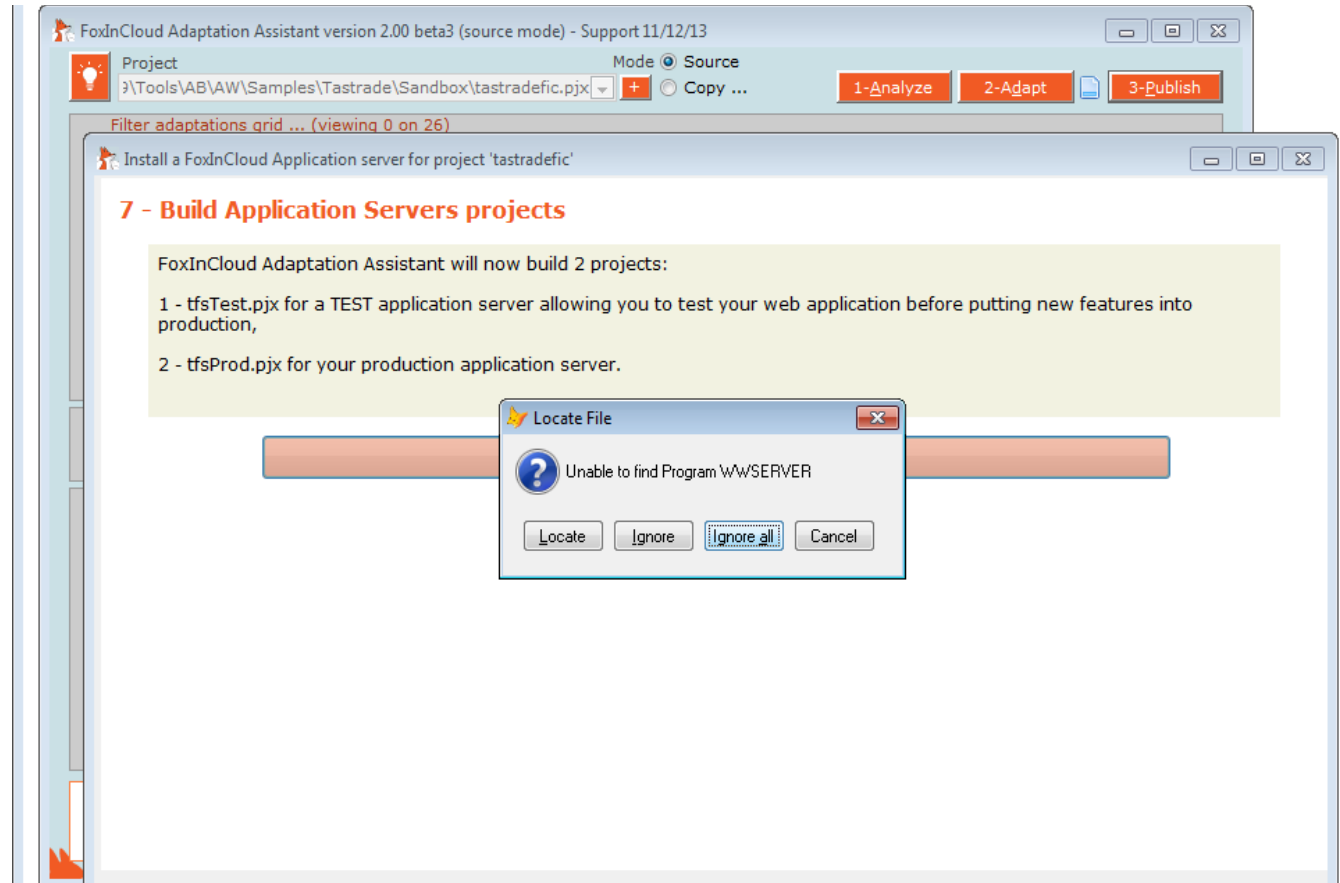
FAA builds 2 projects so that you can later install 2 distinct apps and COM objects on your production server.





7/ Building application server projects ...

While attempting to build your projects, if FAA asks for missing references, just **ignore all** references will be found later.





7/ Building application server projects ...

FAA warns you if some reference are still missing due to an incomplete `Set ('PATH')`.

This is a **simple WARNING**, you can carry on.

FoxInCloud Adaptation Assistant version 2.00 beta3 (source mode) - Support 11/12/13

Project: `\\Tools\AB\AW\Samples\Tastrade\Sandbox\tastradefic.pjx` Mode: Source Copy ...

1-Analyze 2-Adapt 3-Publish

Filter adaptations grid ... (viewing 0 on 26)

Install a FoxInCloud Application server for project 'tastradefic'

7 - Build Application Servers projects

FoxInCloud Adaptation Assistant will now build 2 projects:

- 1 - tfsTest.pjx for a TEST application server allowing you to test your web application before putting new features into production,
- 2 - tfsProd.pjx for your production application server.

Build 2 application servers projects

This is a simple warning for your information; you can go ahead installing.

Building your Application Server projects encountered some trouble:
"Filecompile() - File 'tfsTest.pjx.prg' compiled successfully
Project 'C:\Program Files\VP9\Tools\AB\AW\Samples\Tastrade\Sandbox\tfstest.pjx' could not be (re)built properly
Filecompile() - File 'tfsProd.pjx.prg' compiled successfully
Project 'C:\Program Files\VP9\Tools\AB\AW\Samples\Tastrade\Sandbox\tfsprod.pjx' could not be (re)built properly"

You may (re)build your projects by running the following programs:
C:\Program Files\VP9\Tools\AB\AW\Samples\Tastrade\Sandbox\tfsTest.pjx.prg
C:\Program Files\VP9\Tools\AB\AW\Samples\Tastrade\Sandbox\tfsProd.pjx.prg



8/ Testing your Web application in http://localhost/...

Clicking
'Yes' will:

1- start your
test
FoxInCloud
App Server
in VFP IDE

2- Open
your test
site default
home
page.

FoxInCloud Adaptation Assistant version 2.00 beta3 (source mode) - Support 11/12/13

Project: \\Tools\AB\AW\Samples\Tastrate\Sandbox\tastratefic.pjx | Mode: Source | 1-Analyze | 2-Adapt | 3-Publish

Filter adaptations grid ... (viewing 0 on 26)

File	Object/Class	Base Class	Module	Type	Adaptation

Review... | All (0) | Reviewed (0) | Not ignored (0)

Estimated adaptation time: 0 minutes

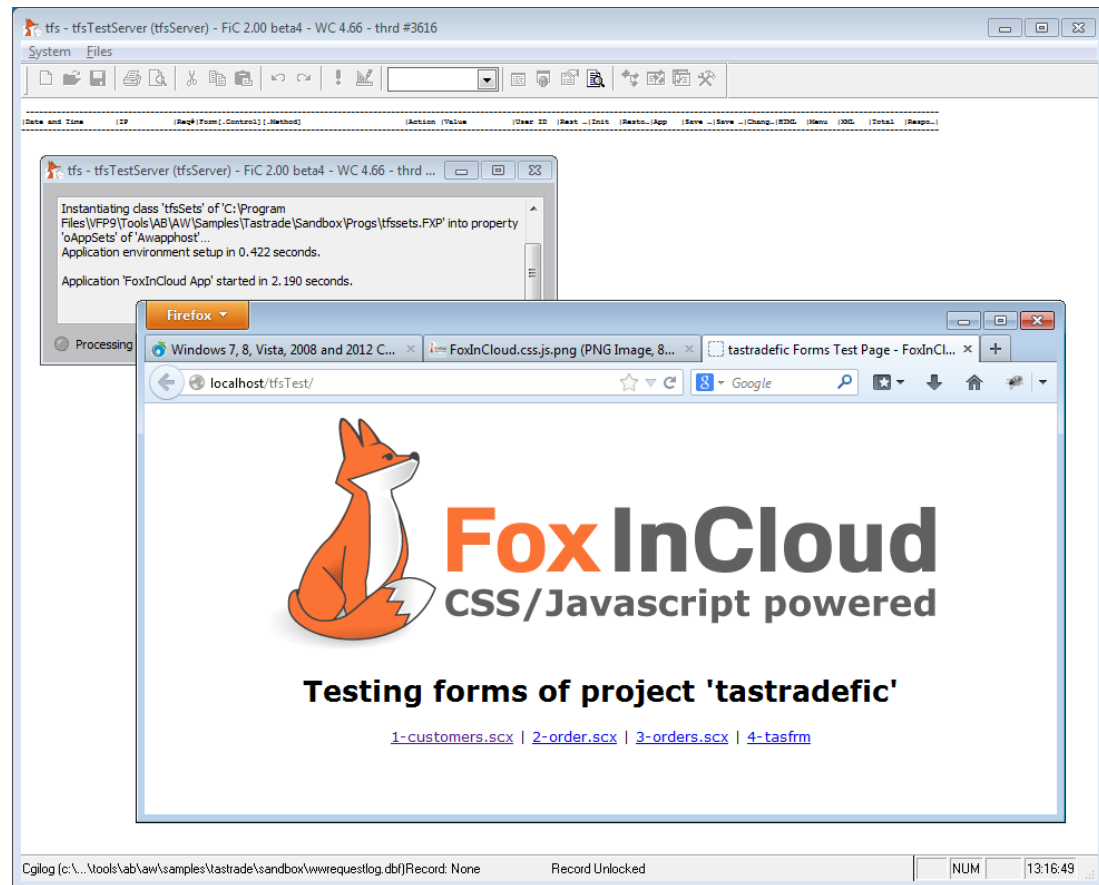
5 Files	186 Modules	Manual adaptations (%) 0.00 %	Quit
161 Classes	193 Instructions	Estimated time (man.days) 0.0 days	
4 Forms	0 Manual adaptations		



8/ Testing your Web application in http://localhost/...

Note to trial version users:

Check VFP IDE for any wConnect splash form, click 'continue' if any.





8/ Testing your Web application in `http://localhost/...`

Clicking the `customers.scx` link displays the customers form inside the browser

Note how the menu and form are similar to VFP originals ...

The screenshot shows a Firefox browser window with the URL `localhost/tfsTest/wFormStandardPageTest.tfs?awFrm=customers_scx`. The application displays a table of customer data and a detailed form for the selected customer, 'Alfreds Futterkiste'.

company	contact	contact title	phone	city	address
Alfreds Futterkiste	Maria Anders	Sales Repres...	030-0074321	Berlin	Obere Str...
Ana Trujillo Empa...	Ana Trujillo	Owner	(5) 555-4729	México ...	Avda. de la
Antonio Moreno T...	Antonio Moreno	Owner	(5) 555-3932	México ...	Mataderos
Around the Horn	Thomas Hardy	Sales Repres...	(71) 555-7788	London	120 Hanov
Berglunds snabb...	Christina Bergl...	Order Adminis...	0921-12 34 65	Luleå	Berguvsväg
Blauer See Delik...	Hanna Moos	Sales Repres...	0621-08460	Mannheim	Forsterstr. :
Blondel père et fils	Frédérique Cite...	Marketing Man...	88.60.15.31	Strasbo...	24, place K
Bólido Comidas p...	Martin Sommer	Owner	(91) 555 22 82	Madrid	C/ Araquil, I

Customer details form for 'Alfreds Futterkiste':

- Company: Alfreds Futterkiste
- Phone: 030-0074321
- Address: Obere Str. 57
- Postal code: 12209
- City: Berlin
- Country: Germany
- Contact name: Maria Anders
- Contact title: Sales Representative
- Discount: 2
- Min. amt: \$ 2,600.00
- Max. amt: \$ 6,300.00

Buttons: Print, Close

Footer: myCompany :: FoxInCloud

Session 3, episode 2

Manual adaptations after step 3





A very last round of adaptations ...

FAA has built `xxxSets.prg`, your app init. class, with whatever code found in your desktop app `main.prg`;

You now need to review this generated code.

The screenshot shows the 'Assistant d'Adaptation FoxInCloud version 2.00 beta4 (mode source) - Support 12/11/13' window. The interface includes a project path, mode selection (Source), and buttons for '1-Analyser', '2-Adapter', and '3-Publier'. A table lists adaptations with columns for 'Objet/Classe', 'Classe de base', 'Module', 'Type', and 'Adaptation'. A yellow sticky note with the text 'What's new?' is placed over the table. Below the table are buttons for 'Revoir...', 'Ignorer...', and status indicators for 'Tous (7)', 'Revus (0)', 'Non revus (7)', 'Ignorés (0)', and 'Non ignorés (7)'. A code editor shows the command `do form customers` and a warning message: 'Cette instruction affiche le formulaire d'accueil de votre application. Cette instruction ne doit s'exécuter qu'en mode LAN. En mode Web, après que vous aurez exécuté l'étape 3 (publication), votre formulaire principal apparaîtra comme la page d'accueil du site en procédant comme suit : 1- dans votre serveur Web (IIS en général), redirigez 'index.htm' vers 'votreForm.xxx', où 'xxx' est le code de votre application (choisissez 'redirection permanente'), 2. dans votre serveur web, créez cette méthode :'. A progress bar at the bottom indicates 'Temps d'adaptation estimé : 10 minutes' and a summary of 1 file, 0 classes, 0 forms, 1 module, 18 instructions, and 0 manual adaptations. The status bar shows 'Adaptations man. (%) 0,00 %' and 'Temps estimé (jour.h) 0,0 j.'.

Objet/Classe	Classe de base	Module	Type	Adaptation
		tastradefic	Adaptation manuelle après é	Chemin absolu
		tastradefic	Adaptation manuelle après é	SET à exécuter au lancement de l'application
tastradefic.prg		tastradefic	Adaptation manuelle après é	SET à exécuter au lancement de l'application
tastradefic.prg		tastradefic	Adaptation manuelle après é	SET à exécuter au lancement de l'application
tastradefic.prg		tastradefic	Adaptation manuelle après é	SET à exécuter au lancement de l'application
tastradefic.prg		tastradefic	Adaptation manuelle après é	DO FORM <formulaire principal>
tastradefic.prg		tastradefic	Adaptation manuelle après é	SET à exécuter au lancement de l'application



Reviewing tfsSets.prg code

`tfsSets.Init()`
fires when
application starts,
`tfsSets.destroy()`
fires when it stops.

`tfsSets.wlLan` &
`tfsSets.wlWeb`
tell whether app
runs in desktop or
Web mode.

`tfsSets.Set()`
performs SETtings
and restores initial
`Set()` when
application
unloads.

```
ABC tfssets.prg
* -----
* Before this code executes, FoxInCloud Application Server has set CurDir() to
* the application's main folder, where project resides
* (C:\Program Files\VFP9\Tools\AB\AW\Samples\Tastrade\Sandbox\
* All the following paths are relative to this folder ...

SET PATH TO ".\..\_DATA\;..\..\_LIBS\;.\CLASS\;.\FORM\;.\PROGS\" ADDITIVE

IF NOT InList(_VFP.StartMode, 2, 3, 5) && In COM automation mode, Visual FoxPro implicitly p
    SET PROCEDURE TO tastradefic ADDITIVE
|
  ClassLibAdd("tastradefic.vcx,tfs.vcx") && modify command abDev
  EXTERNAL PROCEDURE ClassLibAdd

ENDIF

this.Set("Status Bar", 'off')

if this.wlLAN
  set systemu save
endif

do foxyPreviewer.app
do tastradeFIC.mpr

return m.success

* -----
PROCEDURE Destroy

= DoDefault()

if this.wlLAN
  set systemu to default
endif

removeProperty(_Screen, 'oFoxyPreviewer')
```



Choose your app home page

Go to your test app virtual, switch to contents view, select [index.htm](#), switch back to features view, open 'HTTP redirect', click redirect to [index.tfs](#).

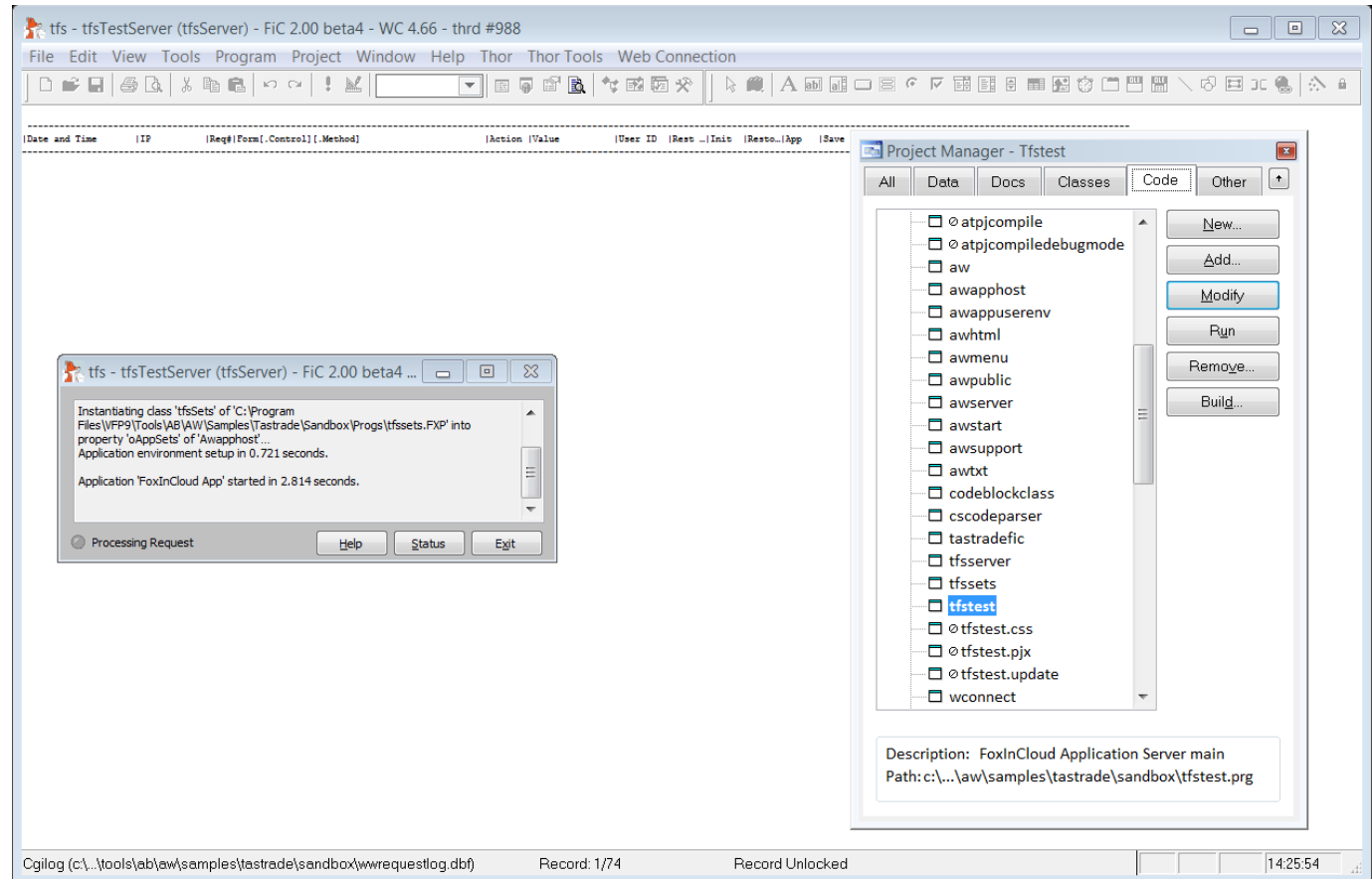
The screenshot displays the IIS Management Console interface. On the left, the 'Connexions' pane shows a tree view of virtual directories under 'THN-W7-32 (THN-W7-32)\ThierryNivelet'. The 'Sites' folder is expanded to show 'Default Web Site', which contains numerous virtual directories. The 'tfsTest' directory is selected, and its contents are visible, including 'index.htm'. The main pane shows the 'Redirection HTTP' configuration for the selected file. The 'Rediriger les demandes vers cette destination' checkbox is checked, and the destination is set to 'index.tfs'. The 'Exemple' field shows 'http://www.contoso.com/sales'. Under 'Rediriger le comportement', the 'Rediriger toutes les dem. vers dest. exacte (et non par rapport à leur dest.)' checkbox is unchecked, and the 'Rediriger unique. les dem. contenu de ce rép. (pas les sous-rép.)' checkbox is also unchecked. The 'Code d'état' dropdown is set to 'Permanent (301)'. The right pane shows the 'Actions' section with 'Appliquer' and 'Annuler' buttons, and a link to 'Aide en ligne'.



Starting your FAS in development mode ...

In your app. folder, open your web project named

`tfsTest.pjx`, and run the eponym `tfsTest.prg`





Displaying standard FoxInCloud home page

Your web app has now built the home page using FAS's standard `awProcess.index()` method.

You can override this code in your subclass `tfsServer.prg !tfsProcess`





Allowing anonymous access to app's forms

As this sample app is public, you need to set `.wlAnonymousAllowed` to `.T.` in your form class.

In a real-life application, only the login form should have this ability.

The screenshot displays two windows from a development tool. The 'Properties - tastradefic.vcx (tasfrm)' window shows a list of properties for the 'tasfrm' class. The 'wAnonymousAllowed' property is highlighted and set to '.T.'. Below the list, a tooltip reads: '{en} Web: An anonymous user may use this form. Set .T. for most...'. The 'Class Designer - tastradefic.vcx (tasfrm)' window shows a form with a yellow background and an 'OK' button. The 'Properties' window also shows other properties like 'wMsgPath', 'wInputBoxClass', 'wLocFileClass', 'wMessageBoxClass', 'wModalChoiceProp', 'wPropSave', 'wPutFileClass', 'wUserID', 'wWindowTheme', 'wContentChanged', 'wContentDynamic', 'wHTMLgen', 'wInitFirst', 'wModal', 'wPrivate', 'wPropsRestore', 'wPropsSave', 'wSubForm', 'wViews3Requery', 'wWeb', 'wnButton', 'wnDataSessionID', 'wnReq', 'wnShift', 'wnXcoord', 'wnYcoord', 'woAJAX', 'woForm', 'woFormDS', 'woHTMLGen', and 'wuPK'.



Displaying a form from the 'Files' menu

By default, FAA adapts `DO FORM` into `wForm()`; this makes form to display as a child window of current page...

The screenshot shows a Firefox browser window with the address bar at `localhost/tfsTest/index.tfs`. The main content area displays a table of customer data. A modal window titled "Tastrade Customers - FoxInCloud App" is overlaid on top, showing a table of customer data and a form for editing details.

company	contact	contact title	phone	city	address
Alfreds Futterkiste	Maria Anders	Sales Repres...	030-0074321	Berlin	Obere Str...
Ana Trujillo Empa...	Ana Trujillo	Owner	(5) 555-4729	México ...	Avda. de la
Antonio Moreno T...	Antonio Moreno	Owner	(5) 555-3932	México ...	Mataderos
Around the Horn	Thomas Hardy	Sales Repres...	(71) 555-7788	London	120 Hanov
Berglunds snabb...	Christina Bergl...	Order Adminis...	0921-12 34 65	Luleå	Berguvsväg
Blauer See Delik...	Hanna Moos	Sales Repres...	0621-08460	Mannheim	Forsterstr. 5
Blondel père et fils	Frédérique Cite...	Marketing Man...	88 60 15 31	Strasbo...	24, place K
Bólido Comidas p...	Martín Sommer	Owner	(91) 555 22 82	Madrid	C/ Araquil...

The modal window also contains a form for editing customer details:

Customer details | Customer Orders

Company: Alfreds Futterkiste | Phone: 030-0074321

Address: Obere Str. 57

Postal code: 12209 | City: Berlin | Country: Germany

Contact name: Maria Anders | Min. amt: \$ 2,600.00 | Save

Contact title: Sales Representative | Discount: 2 | Max. amt: \$ 6,300.00 | Cancel

Print | Close



Displaying a form from the 'Files' menu in its own page...

Would you prefer your form to display in its own HTML page, just open your menu snippet and change `wForm()` into `wFormMaster()`, and discard parameter #2 (.F.)

The screenshot shows two windows from a software development environment. The left window is titled 'Properties - Desktop' and shows the 'Screen' tab. It contains a list of properties for a screen object, including:

ActiveForm	0
BaseClass	Form
Class	Form
ClassLibrary	(None)
DefOleLCID	0
Docked	F. - False (Default)
Enabled	T. - True (Default)
HWnd	131944
HelpContextID	0
KeyPreview	F. - False (Default)
Name	Screen
OLEDragMode	0 - Manual (Default)
OLEDropEffects	3
OLEDropHasData	-1
OLEDropMode	0 - Disabled (Default)
Parent	0
ParentClass	(None)
ReleaseType	1
ShowInTaskBar	T. - True (Default)
TabIndex	0
TabStop	T. - True (Default)
WhatsThisHelp	F. - False (Default)
WhatsThisHelpID	-1
WindowType	0 - Modeless
memberdata	<VFPData> <memberdata
clanguser	fr
foxyviewerorigoutput	C:\PROGRAM FILES\VF
foxyviewerorigpreview	C:\PROGRAM FILES\VF
foxyviewerorigreportbehav	90

The right window is titled 'Menu Designer - tastradefic - Customers Procedure *' and shows a menu snippet with the following code:

```
*-FIC- Replaced by FoxInCloud Adaptation Assistant versio
*-FIC- do form customers

external form customers
customers = wFormMaster('customers.scx') && second parameter
```




Displaying a form from the 'Files' menu in its own page...

When your menu is open, click `menu > generate`, then `modify` command `tastrade.mpr` ... you'll see the FIC menu generator in action ...

The screenshot shows two windows from a development environment. The left window is titled 'Properties - Desktop' and shows the 'Screen' properties for a form. The right window is titled 'tastrade.mpr' and shows the menu definition code.

Property	Value
ActiveForm	0
BaseClass	Form
Class	Form
ClassLibrary	(None)
DefOleLCID	0
Docked	F - False (Default)
Enabled	T - True (Default)
Hwnd	131544
HelpContextID	0
KeyPreview	F - False (Default)
Name	Screen
OleDragMode	0 - Manual (Default)
OleDropEffects	3
OleDropHasData	-1
OleDropMode	0 - Disabled (Default)
Parent	0
ParentClass	(None)
ReleaseType	1
ShowInTaskBar	T - True (Default)
TabIndex	0
TabStop	T - True (Default)
WhatsThisHelp	F - False (Default)
WhatsThisHelpID	-1
WindowType	0 - Modeless
memberdata	<VFPDdata> <memberdata
clanguser	fr
foxpreviewerorigoutput	C:\PROGRAM FILES\VF
foxpreviewerorigpreview	C:\PROGRAM FILES\VF
foxpreviewerorigreportbehav	90

```
*
*
* 12/11/13           TASTRADEFIC.MPR           17:23:20
*
*
* *****
*
* Author's Name
*
* Copyright (C) 2013 Company Name
* Address
* City,      Zip
*
* Description:
* This program was generated by awGenMenu (GenMenu adapted to FoxInCloud).
*
* *****
*
* *****
*
* Menu Definition
*
* *****
*
wMenu ('SET SYSMENU TO')
wMenu ('SET SYSMENU AUTOMATIC')

wMenu ([DEFINE PAD _3xb119lmt OF _MSYSMENU PROMPT "System" COLOR SCHEME 3]
+ [ KEY ALT+S, ""])
wMenu ([DEFINE PAD _3xb119lmu OF _MSYSMENU PROMPT "Files" COLOR SCHEME 3]
+ [ KEY ALT+F, ""])
wMenu ([ON PAD _3xb119lmt OF _MSYSMENU ACTIVATE POPUP system])
wMenu ([ON PAD _3xb119lmu OF _MSYSMENU ACTIVATE POPUP files])

wMenu ([DEFINE POPUP system MARGIN RELATIVE SHADOW COLOR SCHEME 4])
wMenu ([DEFINE BAR _MFI_PGSET OF system PROMPT "Print setup"])
wMenu ([DEFINE BAR _MFI_SYSPRINT OF system PROMPT "Print"])
wMenu ([DEFINE BAR 3 OF system PROMPT "Exit"])
wMenu ([ON SELECTION BAR 3 OF system clear events])
```



Display the 'order' child form by double clicking an orders grid row

```
gridOrders.d  
blClick()  
calls  
thisForm.w  
Form('orde  
r.scx', ...):  
order form  
displays in  
a child  
window  
within  
current  
page.
```

System > Files >
FoxInCloud App

Tastrate Customers - FoxInCloud App

Order # 214 for customer 'Berglunds snabbköp' - original - FoxInCloud App

Employee: Albert Hellstern 04/14/2009

Ship to

Recipient name: Berglunds snabbköp

Berguvsvägen 9

Luleå S-958 22 Sweden

Discount: 10

Pay Term: 15 days 1 month 2 months

Paid

Notes

product	unit price	quantity
Chocolate	\$8.00	30
Côte de Blaye	\$184.40	10
Lakkalikööri	\$12.60	11

Print OK



Setting the 'modal return' property in order form

For the order form callback to work, you need to set `.wcModalChoiceProp` to the name of the property holding the returned value, `'lEdit'` here.

The screenshot displays two windows from a software development environment:

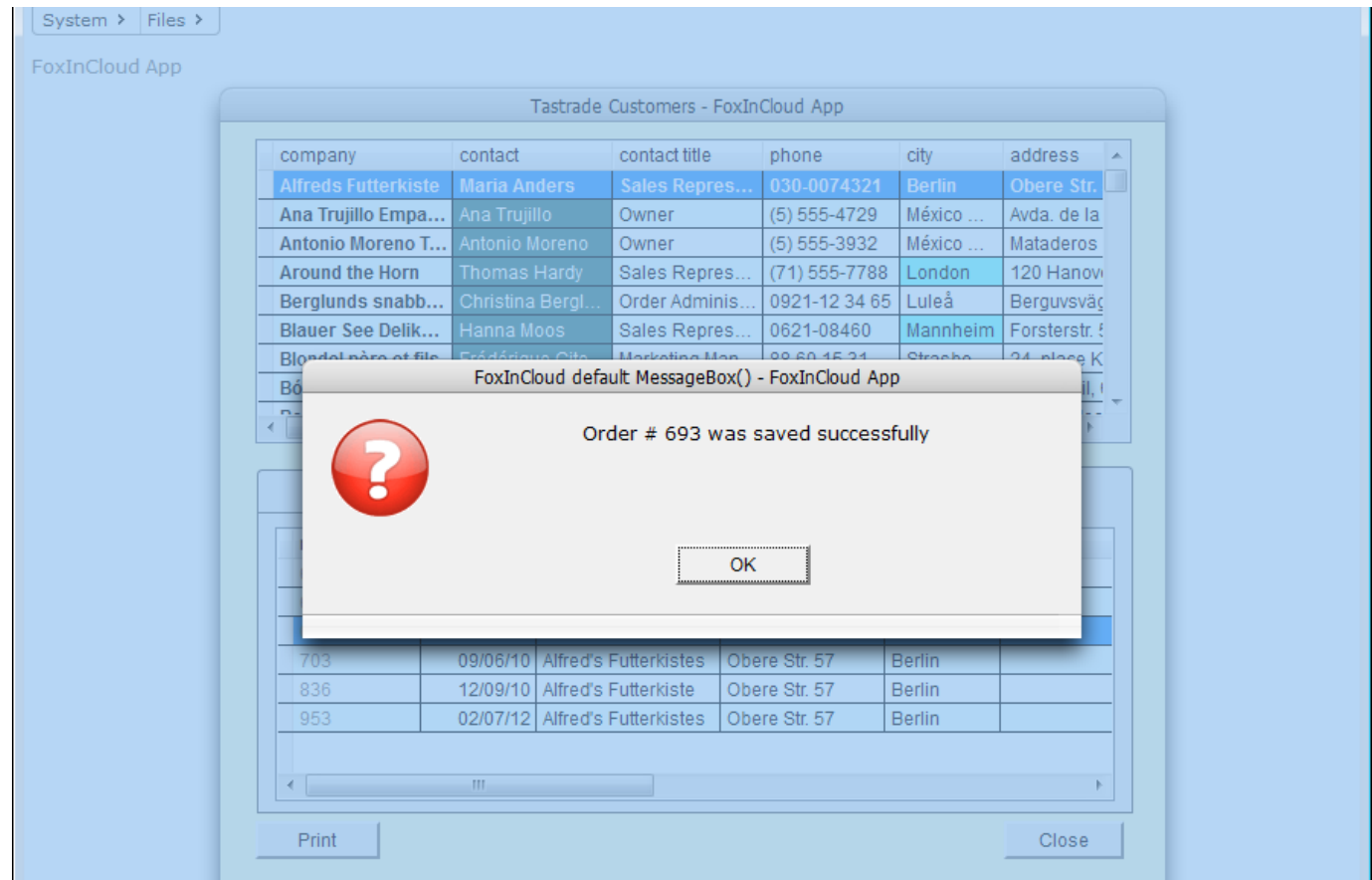
- Properties - order.scx:** A window showing a list of properties for the `frmOrder` form. The `wcModalChoiceProp` property is highlighted in blue, and its value is set to `wuPK.lEdit.Caption`.
- Form Designer - order.scx:** A window showing the design-time code for the `frmOrder.Unload` procedure. The code is as follows:

```
RETURN m.this.lEdit
&& manual adaptation, at design time:
&& set this.wcModalChoiceProp = 'lEdit'
```



Modal form call-back in action

Once `.wcModalChoiceProp` is set to `'lEdit'`, a message box appears whenever user modifies the order before closing the child form.





Reporting as PDF

Using `.wFileSaveAs()` opens a new tab in the browser, facing the standard popup blocker; this requires user's consent.

The screenshot shows a Firefox browser window with a yellow warning bar at the top stating "Firefox prevented this site from opening a pop-up window." Below this, a modal dialog box displays an error message. The error message text is as follows:

Oops, an error occurred while processing Ajax response ...
As subsequent instructions did not execute, display might be erroneous

Error details:
Type: NS_ERROR_FAILURE
Message: Failure
Line #2705

Note: this message is intended to the FoxInCloud developer only, it won't display to end user.

An "OK" button is visible at the bottom of the error dialog.

The background of the browser window shows a table titled "Tastrade Customers - FoxInCloud App" with the following data:

company	contact	contact title	phone	city	address
Alfreds Futterkiste	Maria Anders	Sales Repres...	030-0074321	Berlin	Obere Str.
Ana Trujillo Empa...	Ana Trujillo	Owner	(5) 555-4729	México ...	Avda. de la
Antonio Moreno T...	Antonio Moreno	Owner	(5) 555-3932	México ...	Mataderos
Around the Horn	Thomas Hardy	Sales Repres...	(71) 555-7788	London	120 Hanov
Berglunds snabb...	Christina Bergl...	Order Adminis...	0921-12 34 65	Luleå	Berguvsvä
Blauer See Delik...	Hanna Moos	Sales Repres...	0621-08460	Mannheim	Forsterstr. f
Blondel père					4, place K
Bólido Comid					/ Araquil, t



Reporting as PDF...

Once user allows popups on your web app, the PDF report displays in a new window.

Alternatively, you can display the pdf in a child form using your subclass of `aw.vcx!`
`awolepdf*`

CUSTOMER
11/12/13

Fox InCloud

Customer Id: ALFKI Phone: 030-0074821 Fax: 030-0076546
Company Name: Alfred's Futterkiste
Contact Name: Maria Anders
Contact Title: Sales Representative
Address: Obere Str. 57
City: Berlin Postal Code: 12209 Country: Germany

Max Order Amt: 6,300.00
Min Order Amt: 2,600.00
Discount: 2
Sales Region:

<u>Order Id</u>	<u>Customer Id</u>	<u>Shipper Id</u>	<u>Order Number</u>	<u>Order Date</u>	<u>Deliver By</u>	<u>Ship To Name</u>	<u>Paid</u>
953	ALFKI	1	953	02/07/12	03/21/11	Alfred's Futterkistes	Y
836	ALFKI	3	836	12/09/10	01/06/11	Alfred's Futterkiste	Y
703	ALFKI	1	703	09/06/10	10/18/10	Alfred's Futterkistes	Y
693	ALFKI	3	693	08/27/10	09/24/10	Alfred's Futterkiste test test test	Y
644	ALFKI	3	644	07/19/10	08/16/10	Alfred's Futterkiste	Y
63	ALFKI	1	63	08/21/08	09/18/08	Alfred's Futterkistes	Y



.MouseEnter() / .MouseLeave() effects using CSS

If you use VFP's .MouseEnter() / .MouseLeave() for visual effects on hovered objects, you can easily achieve the same result using CSS

```
1  /*
2  This your application's style sheet.
3  By default, [see awServer.prg!awProcess::cawCSSinc()], FoxInCloud loads this styleSheet after
4  javascript components' CSS, and default CSS generated from your application's classes
5  and forms: [awDefault.css]
6  You may add any CSS directives to override styles inherited from you VFP application's
7  visual objects.
8  */
9
10 /* this CSS replaces the desktop .MouseEnter() and .MouseLeave() */
11
12 #customers_scx-pgf-pagdetails input:hover, #customers_scx-pgf-pagdetails select:hover {
13     background-color: rgb(190,190,190);
14     border-color: transparent;
15     box-shadow: 2px 2px 2px #535353;|
16 }
17
```





.MouseEnter() / .MouseLeave() effects using CSS...

Adding the proper CSS directives to your app's css (tfs.css here) produces a cool bgcolor change when hovering controls.

Firefox

Windows 7, 8, Vista, 2008 and ... x | FoxInCloud.css.js.png (PNG I... x | Tastrade Customers - FoxInCl... x | customer_ALFKI.pdf x +

localhost/tfs/Test/wFormStandardPage.tfs?awForm=customers.scx

System > Files >

FoxInCloud App

Tastrade Customers - FoxInCloud App

company	contact	contact title	phone	city	address
Alfreds Futterkiste	Maria Anders	Sales Repres...	030-0074321	Berlin	Obere Str...
Ana Trujillo Empa...	Ana Trujillo	Owner	(5) 555-4729	México ...	Avda. de la
Antonio Moreno T...	Antonio Moreno	Owner	(5) 555-3932	México ...	Mataderos
Around the Horn	Thomas Hardy	Sales Repres...	(71) 555-7788	London	120 Hanov
Berglunds snabb...	Christina Bergl...	Order Adminis...	0921-12 34 65	Luleå	Berguvsväg
Blauer See Delik...	Hanna Moos	Sales Repres...	0621-08460	Mannheim	Forsterstr. :
Blondel père et fils	Frédérique Cite...	Marketing Man...	88.60.15.31	Strasbo...	24, place K
Bólido Comidas p...	Martin Sommer	Owner	(91) 555 22 82	Madrid	C/ Araquil, :

Customer details

Company: Alfreds Futterkiste Phone: 030-0074321

Address: Obere Str. 57

Postal code: 12209 City: Berlin Country: Germany

Contact name: Maria Anders Min. amt: \$ 2,600.00 Save

Contact title: Sales Representative Discount: 2 Max. amt: \$ 6,300.00 Cancel

Print Close

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FoxInCloud App

Session 3, episode 3

Getting prepared for production

Completing this section requires a full [FoxInCloud](#) license.

For more information about this license, please browse <http://foxincloud.com/pricing.php>,
and/or contact sales@foxincloud.com



Compiling your app in production mode

Running
atpjcompileDebugMode.prg
toggles
application
between
dev and
production
modes

The screenshot displays a software development environment with several windows:

- Properties - Desktop**: A window showing the properties of a 'Screen' object. The 'Name' property is set to 'Screen'.
- Command**: A window showing the command prompt with the following text:

```
DO "c:\program files\vfp9\toc  
clear  
DO "c:\program files\vfp9\toc
```
- Project Manager - Tfstest**: A window showing a list of files in a project. The file 'atpjcompiledebugmode' is selected. The 'Run' button is highlighted.
- Compilation Log**: A window showing the output of a compilation process. The text reads:

```
Compilation du projet c:\program files\vfp9\tools\ab\aw\samples\tastrade\sandbox\tfstest.pjx en mode PRODUCTION  
  
Starting C:\Program Files\VFP9\Tools\AB\AT\atpjcompile.FXP at 12/11/13 17:40:52  
1 - C:\...\AB\AW\awserver.PRG OK | 2 - C:\...\WC\classes\wserver.prg OK | 3 - C:\...\c  
lasses\wwProcess.PRG OK | 4 - C:\...\WC\classes\wwmaint.PRG OK | 5 - C:\...\wwscriptmap  
s.PRG OK | 6 - C:\...\AB\AW\awapph  
- C:\...\Tools\AB\AW\awhtml.PRG OK  
.\Tools\AB\AC\acData.PRG OK | 11 -  
lasses\wweval.prg OK  
12 files processed in 00:00:03  
All compiled successfully
```



Running your Application in production mode

In production mode, request log and forms won't appear in screen, and errors are captured by a global handler

The screenshot shows a development environment with two main windows:

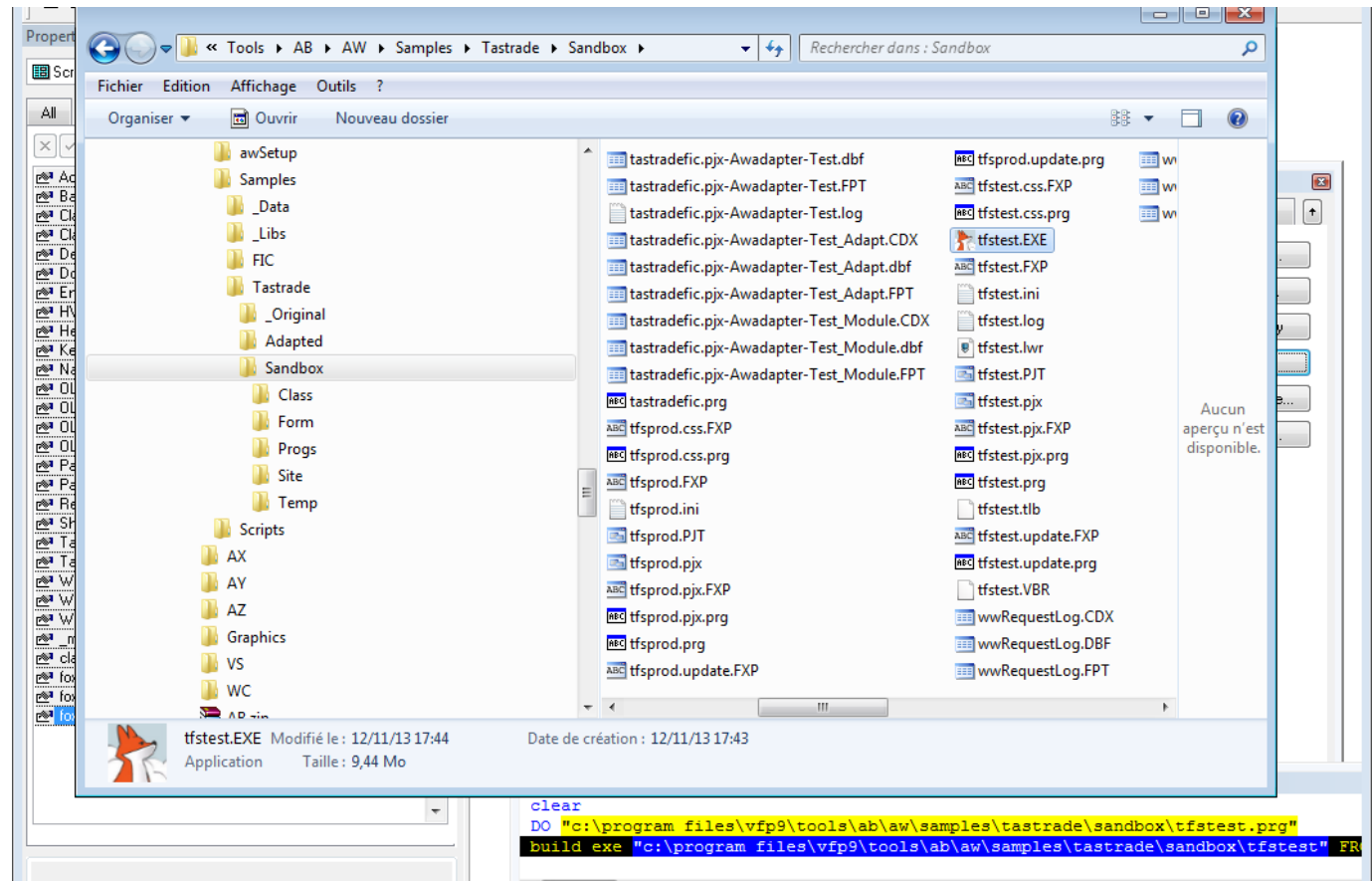
- Properties - Desktop:** A window showing the properties of a 'Screen' object. The 'Name' property is set to 'Screen'. Other properties include 'ActiveForm' (0), 'BaseClass' (Form), 'Class' (Form), 'ClassLibrary' (None), 'DefOleLCID' (0), 'Docked' (F - False (Default)), 'Enabled' (T - True (Default)), 'Hwnd' (131944), 'HelpContextID' (0), 'KeyPreview' (F - False (Default)), 'OLEDragMode' (0 - Manual (Default)), 'OLEDropEffects' (3), 'OLEDropHasData' (-1), 'OLEDropMode' (0 - Disabled (Default)), 'Parent' (0), 'ParentClass' (None), 'ReleaseType' (0), 'ShowInTaskBar' (T - True (Default)), 'TabIndex' (0), 'TabStop' (T - True (Default)), 'WhatsThisHelp' (F - False (Default)), 'WhatsThisHelpID' (-1), 'WindowType' (0 - Modeless), 'memberdata' (<VFPData> <memberdata>), 'clanguser' (fr), 'foxyviewerorigoutput' (C:\PROGRAM FILES\VF\), 'foxyviewerorigpreview' (C:\PROGRAM FILES\VF\), 'foxyviewerorigreportbehav' (90), and 'oFoxyPreviewer' (Object).
- Processing Request:** A dialog box showing a log of requests. The log includes:
 - 17:42:18 index.tfs - 1,032
 - 17:42:25 AJAXmenuSelect.tfs
 - 8id=popup-files-1&PageInit=&UserID=&Value=null&ValueType=object&nReq=1 - 0,832
 - 17:42:26 wFormStandardPage.tfs awForm=customers.scx - 1,152
 - 17:42:27 MethExec.tfs
 - 8MethAddr=InitControlsInet&ObjAddr=customers_scx&PageInit=true&UserID=&nReq=1&awForm=customers.scx - 1,902The dialog box has buttons for 'Help', 'Status', and 'Exit'. Below the log, there is a list of files with checkboxes, including 'atpcompiledebugmode' which is checked. Other files include 'acga', 'acoop', 'actxt', 'atpiclean', 'atpicompile', 'aw', 'awapphost', 'awappuserenv', 'awhtml', 'awmenu', 'awpublic', 'awserver', 'awstart', 'awsupport', 'awt', 'codeblockclass', 'cscodeparser', 'lastradic', 'tfsserver', 'tfssets', 'tfstest', 'wconnect', 'wwapi', 'wwasprequest', 'wwasyncwebrequest', and 'wwbanner'. A 'Description:' field at the bottom shows the path: 'Path: c:\program files\vp9\tools\ab\at\atpicompiledebugmode.prg'.



Building your application.exe

Like for your desktop app., you distribute your web app. as an executable

Build a COM server (exe)



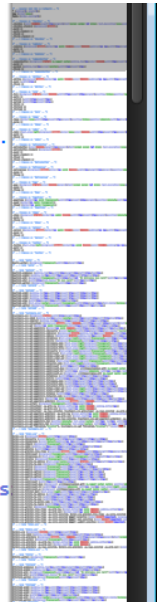


Build your global default CSS (awDefaultAll.css)

Running
`xxxTest.css.prg` builds
your app's
global CSS.

`xxxTest.css.prg` sits in your
project's
home folder,
next to
`xxxTest.*`

```
2 This is the standard style sheet generated as of your VFP application's classes and objects
3 hierarchy.
4 To get the CSS definitions of all class and objects existing in your application, run
5 xxx[Test\Prod].css.prg, or start your FoxInCloud server in file mode with the first parameter set
6 to .T.
7 In this case, the stylesheet generated is named 'awDefaultAll.css', otherwise 'awDefault<Sys(2015)>.
8 css' dynamically refreshed.
9 To make your Web application look and feel different from its VFP 'ancestor', you can simply
10 override any of these CSS definitions in your application's Style Sheet 'xxx.css' (always Loaded
11 Last).
12 -- */
13
14
15 /* -- General (W3C CSS 2.1 default) -- */
16 * {padding:0; margin:0;}
17 img {border:none;}
18 table {border-spacing:0;}
19
20 /* -- Classes as 'Checkbox' -- */
21 .checkbox {color:#000000;height:17px;margin:0;font:normal normal 9pt Arial; text-decoration:none;pos
22 .checkbox.standard {background:#FFFFFF;}
23 .awchk {}
24 .awchk.standard {}
25 .tfschk {}
26 .tfschk.standard {}
27 /* -- / Classes as 'Checkbox' -- */
28
29 /* -- Classes as 'Combobox' -- */
30 .combobox {background:#FFFFFF;border:1px solid #646464;color:#000000;padding:2px 2px;width:94px;heig
31 .awcbo {}
32 .tfsco {}
33 /* -- / Classes as 'Combobox' -- */
34
35 /* -- Classes as 'Commandbutton' -- */
36 .commandbutton {background:#F0F0F0 no-repeat center;padding-top:0px;color:#000000;width:98px;height:
--
```





Running your Web app in COM mode

Open your
wConnect
admin
page,
switch to
COM
mode and
load server.

(browse
[wConnect on
line
documentation](#)
for details)

Web Connection ISAPI Configuration

[Back to Admin Page](#) | [Re-Read Configuration](#) | [Recover Deadlock](#) | [Unload Servers](#) | [Load Servers](#) | [Load One Server](#)

DLL Version: Web Connection 4.67 (32 servers)
Current INI File: c:\program files\vp9\tools\ab\aw\samples\tastrade\sandbox\site\tfstest\bin\wc.INI
File Template: wc
Script Timeout: 600
Temp File Path: c:\users\public\foxincloudtemp\tfs\
Admin Account:
Current Login: Système

Messaging Mechanism: COM Mode | [File Mode](#)
POST Mechanism: URL Encoded
COM Server Loading: Sequential
Keep Alive: Force Keep Alive
Hold Requests: Servers running [Switch](#)
Lock: -1 Recursion: 0 Spin: 0

COM Servers	Hits	Active	Cumulative	Started	PID	Action
tfsTest.tfsTestServer	4	0 secs	4 secs	17:55 - 11/12/2013	1384	Kill

[Show this info as XML](#)



Running your Web app in COM mode ...

As server auto-starts In COM mode, and response times are twice faster than in file mode, COM is the recommended mode for production.

company	contact	contact title	phone	city	address
Alfreds Futterkiste	Maria Anders	Sales Repres...	030-0074321	Berlin	Obere Str. 2
Ana Trujillo Empa...	Ana Trujillo	Owner	(5) 555-4729	México ...	Avda. de la
Antonio Moreno T...	Antonio Moreno	Owner	(5) 555-3932	México ...	Mataderos
Around the Horn	Thomas Hardy	Sales Repres...	(71) 555-7788	London	120 Hanow
Berglunds snabb...	Christina Bergl...	Order Adminis...	0921-12 34 65	Luleå	Berguvsväg
Blauer See Delik...	Hanna Moos	Sales Repres...	0621-08460	Mannheim	Forsterstr. 2
Blondel père et fils	Frédérique Cite...	Marketing Man...	88.60.15.31	Strasbo...	24, place K
Bólido Comidas p...	Martin Sommer	Owner	(91) 555 22 82	Madrid	C/ Araquil...

Customer details		Customer Orders	
Company	Antonio Moreno Taquería	Phone	(5) 555-3932
Address	Mataderos 2312		
Postal code	05023	City	México D.F.
	Country	Mexico	
Contact name	Antonio Moreno	Min. amt	\$ 1,700.00
Contact title	Owner	Discount	6
		Max. amt	\$ 8,500.00

myCompany :: FoxInCloud



Browsing your server log

From your wConnect server admin page, you can browse the requests against your web app.

Web Connection Log				
File: wwRequestLog.DBF Total Log: 110 Today: 110 Displaying last 110 Entries				
Time	Script	Ip	Duration	Memory
12/11/2013 18:00:32	propch.tfs?&Prop=activepage&ObjAddr=customers_scx-pgf&PageInit=&UserID=3X7128VYQ&Value=2&ValueType=number&nReq=	::1	0,78	3657664
12/11/2013 18:00:31	gridmethod.tfs?&MethAddr=wAfterRowChange&ObjAddr=customers_scx-grdcustomer&PageInit=&UserID=3X7128VYQ&Value=ALFKI&V	::1	0,88	3660076
12/11/2013 18:00:30	gridmethod.tfs?&MethAddr=wAfterRowChange&ObjAddr=customers_scx-grdcustomer&PageInit=&UserID=3X7128VYQ&Value=ANTON&V	::1	0,98	3660284
12/11/2013 18:00:29	gridmethod.tfs?&MethAddr=wAfterRowChange&ObjAddr=customers_scx-grdcustomer&PageInit=&UserID=3X7128VYQ&Value=BERGS&V	::1	1,27	3660508
12/11/2013 18:00:27	gridmethod.tfs?&MethAddr=wAfterRowChange&ObjAddr=customers_scx-grdcustomer&PageInit=&UserID=3X7128VYQ&Value=BOLID&V	::1	0,85	3659628
12/11/2013 18:00:26	gridmethod.tfs?&MethAddr=wAfterRowChange&ObjAddr=customers_scx-grdcustomer&PageInit=&UserID=3X7128VYQ&Value=BLAUS&V	::1	0,93	3659488
12/11/2013 18:00:25	gridmethod.tfs?&MethAddr=wAfterRowChange&ObjAddr=customers_scx-grdcustomer&PageInit=&UserID=3X7128VYQ&Value=AROUT&V	::1	1,56	3659688
12/11/2013 18:00:23	gridmethod.tfs?&MethAddr=wAfterRowChange&ObjAddr=customers_scx-grdcustomer&PageInit=&UserID=3X7128VYQ&Value=BLAUS&V	::1	1,01	3659616
12/11/2013 18:00:22	gridmethod.tfs?&MethAddr=wAfterRowChange&ObjAddr=customers_scx-grdcustomer&PageInit=&UserID=3X7128VYQ&Value=ALFKI&V	::1	1,22	3659756
12/11/2013 18:00:21	gridmethod.tfs?&MethAddr=wAfterRowChange&ObjAddr=customers_scx-grdcustomer&PageInit=&UserID=3X7128VYQ&Value=ANATR&V	::1	1,24	3659556
12/11/2013 18:00:19	gridmethod.tfs?&MethAddr=wAfterRowChange&ObjAddr=customers_scx-grdcustomer&PageInit=&UserID=3X7128VYQ&Value=AROUT&V	::1	1,23	3659680
12/11/2013 18:00:18	gridmethod.tfs?&MethAddr=wAfterRowChange&ObjAddr=customers_scx-grdcustomer&PageInit=&UserID=3X7128VYQ&Value=BOLID&V	::1	0,71	3659456
12/11/2013 18:00:17	gridmethod.tfs?&MethAddr=wAfterRowChange&ObjAddr=customers_scx-grdcustomer&PageInit=&UserID=3X7128VYQ&Value=BERGS&V	::1	0,86	3659148



FoxInCloud

A-Z tutorial, Session 4

Requires FAA & FAS V2.0+

Session 4

Deploying for production

Completing this section requires a full [FoxInCloud](#), West-Wind Web Connect, and ActiveWidgets license.

For more information about these licenses, please browse <http://foxincloud.com/pricing.php>, and/or contact sales@foxincloud.com

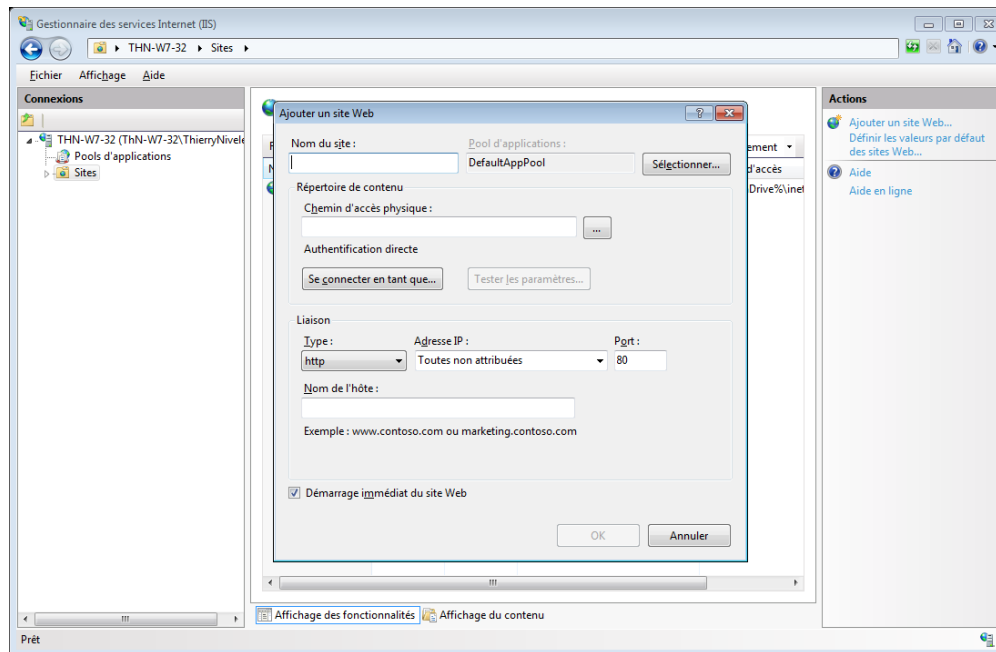
Deploying for production, Agenda



Episode	Subject	Slides
1	Creating your Web App Site	14
2	Creating your Web Application	9
3	Linking Web App Site and Web Application	12
		35

Session 4, episode 1

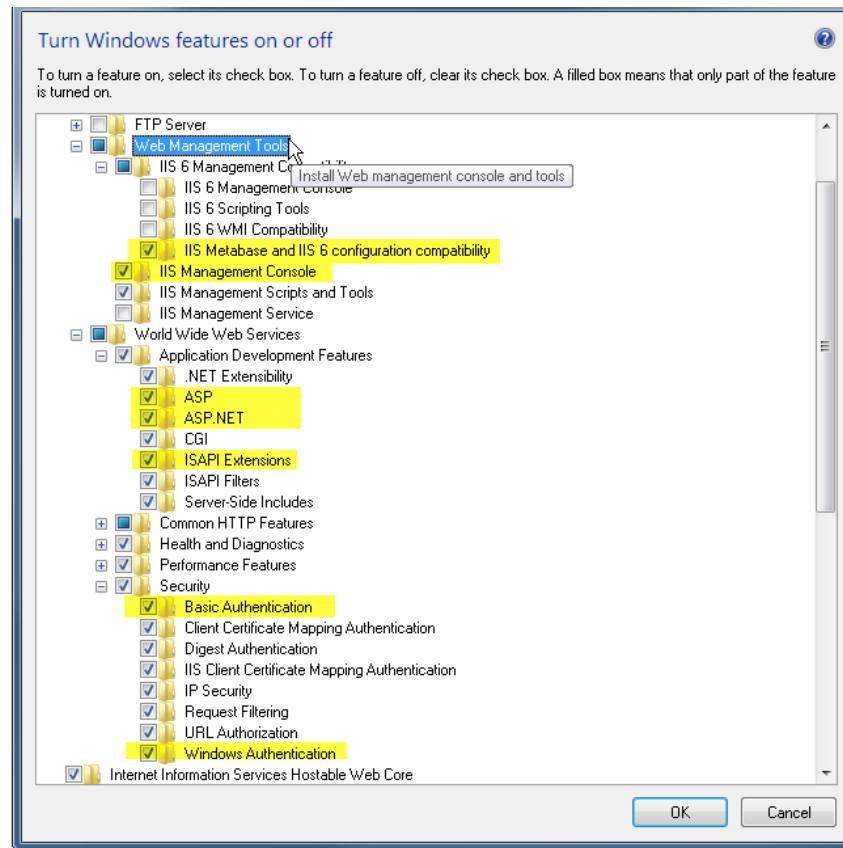
Creating your Web App. Site





If your server runs IIS ≥ 7 , check your IIS installation

If your production server runs IIS 7+ (Windows server 2008+), check your IIS installation as you previously did in FAA step 3-publish.



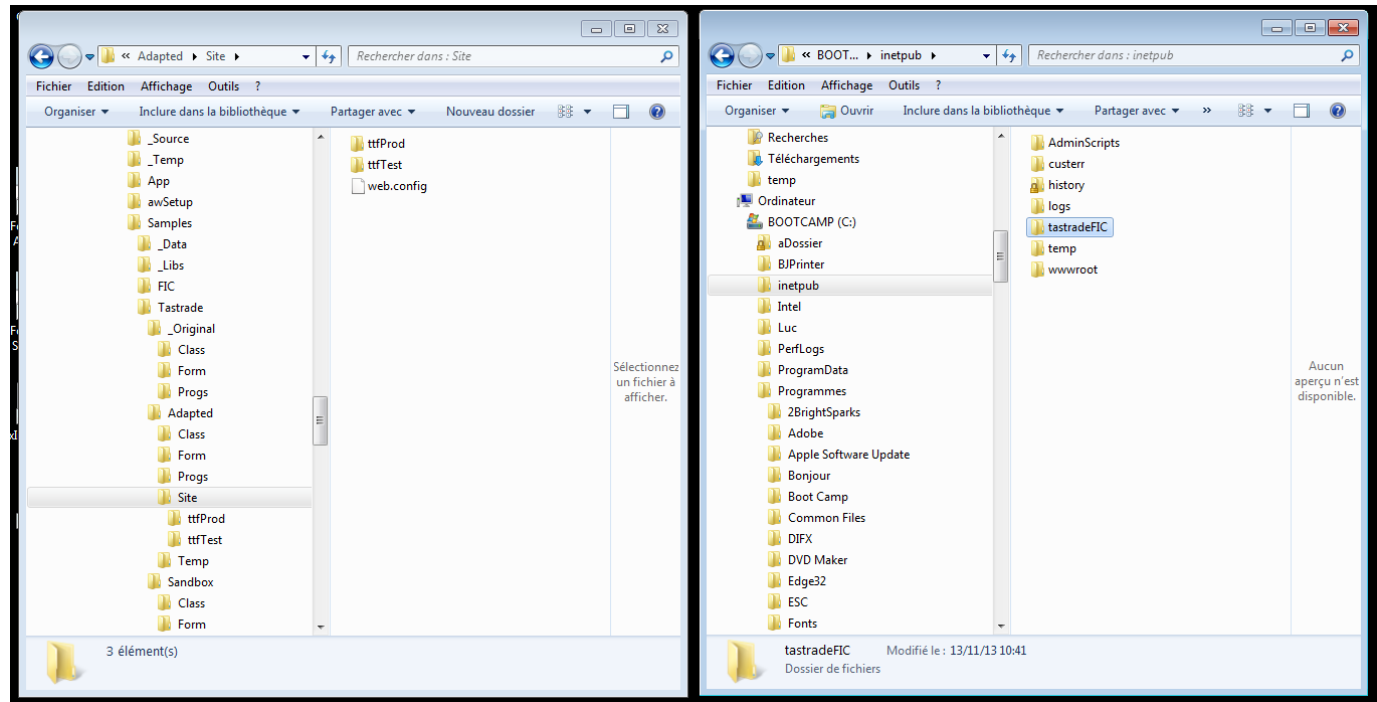
The figure above highlights the critical components that are used by Web Connection and are absolutely required.



Copy site files from dev machine to prod. Server

Source files are in your project's `site\` folder.

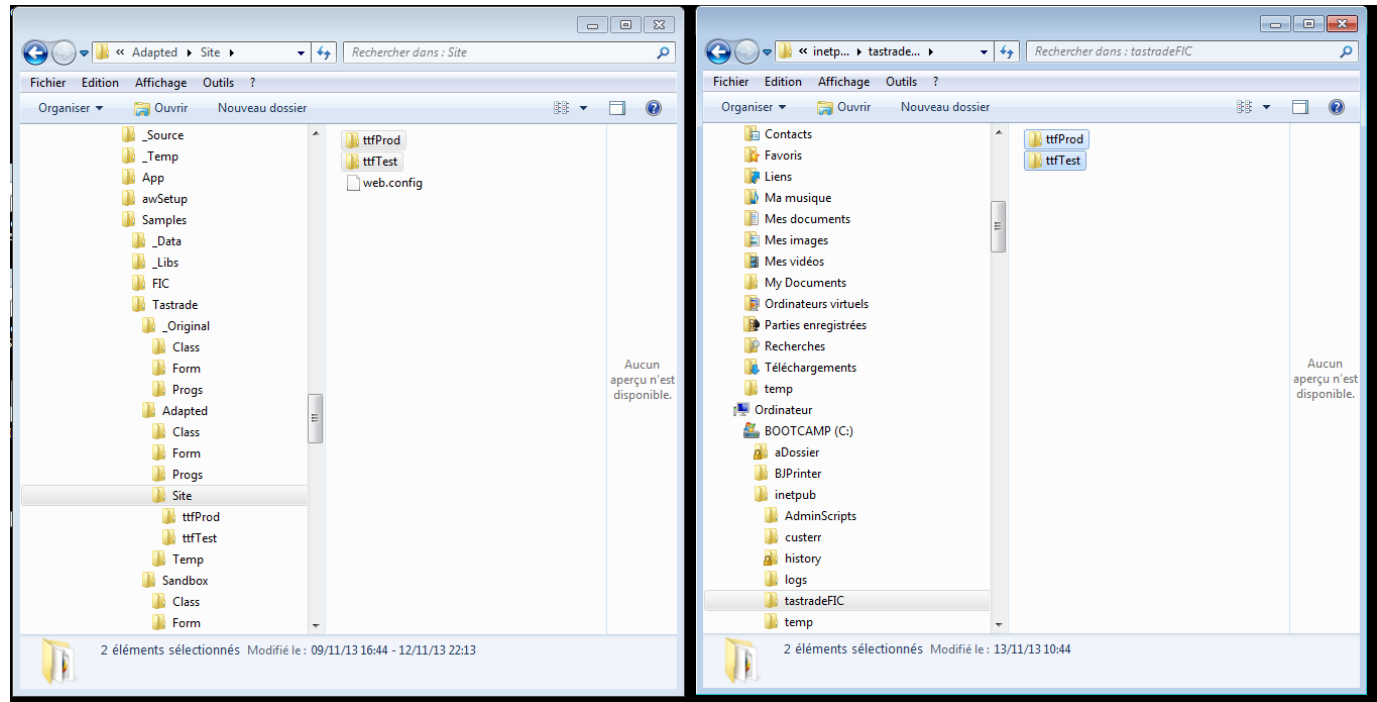
Create a new sub-folder in `inetpub\` and copy your files there.





1 site for tests 1 site for production

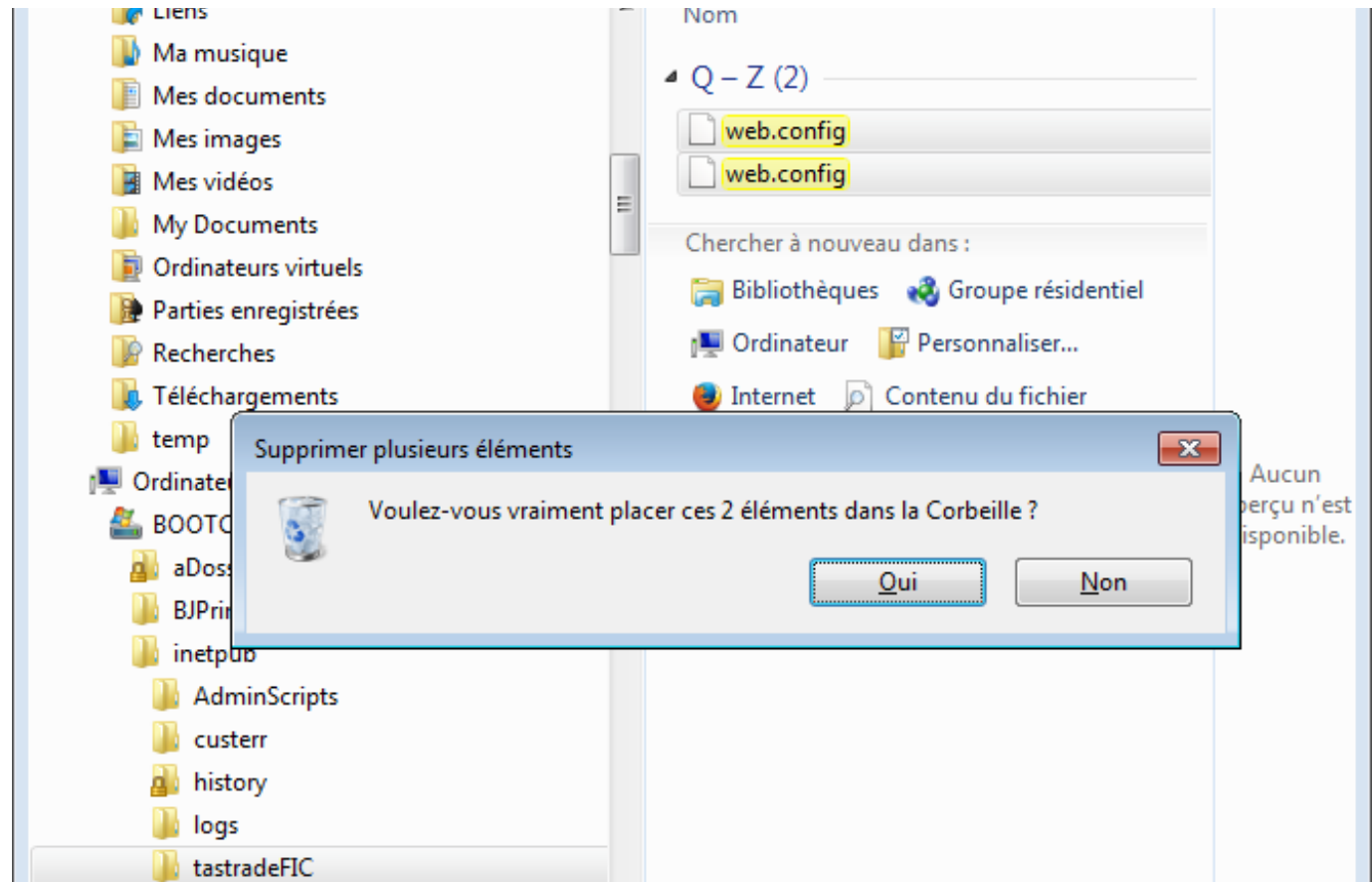
As in your dev. environment, you will create 2 sites on target production server, one for **test** and one for **production**.





Delete copied web.config files

Make sure to delete the `web.config` files as they contain addresses from your dev. machine that are irrelevant on your prod. server.





Create a pool for FoxInCloud applications

(IIS >=6)

At your server root, add an application pool with the properties pictured here.

Ajouter un pool d'applications

Nom :
FoxInCloud

Version du .NET Framework :
.NET Framework v2.0.50727

Mode pipeline géré :
Intégré

Démarrer immédiatement le pool d'applications

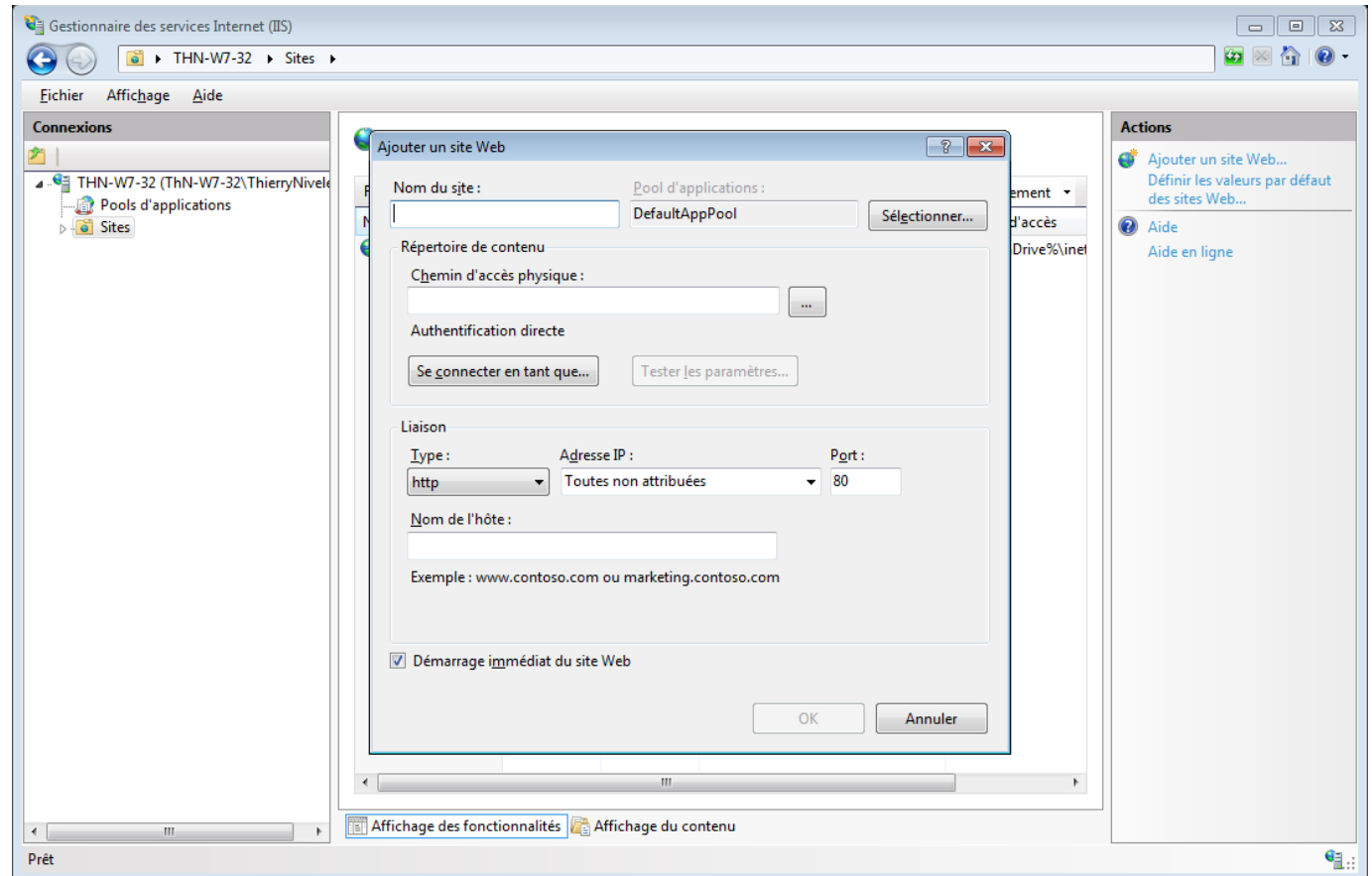
OK Annuler



Create your IIS Web Site

From the server root > sites, add a site using the FoxInCloud app. Pool.

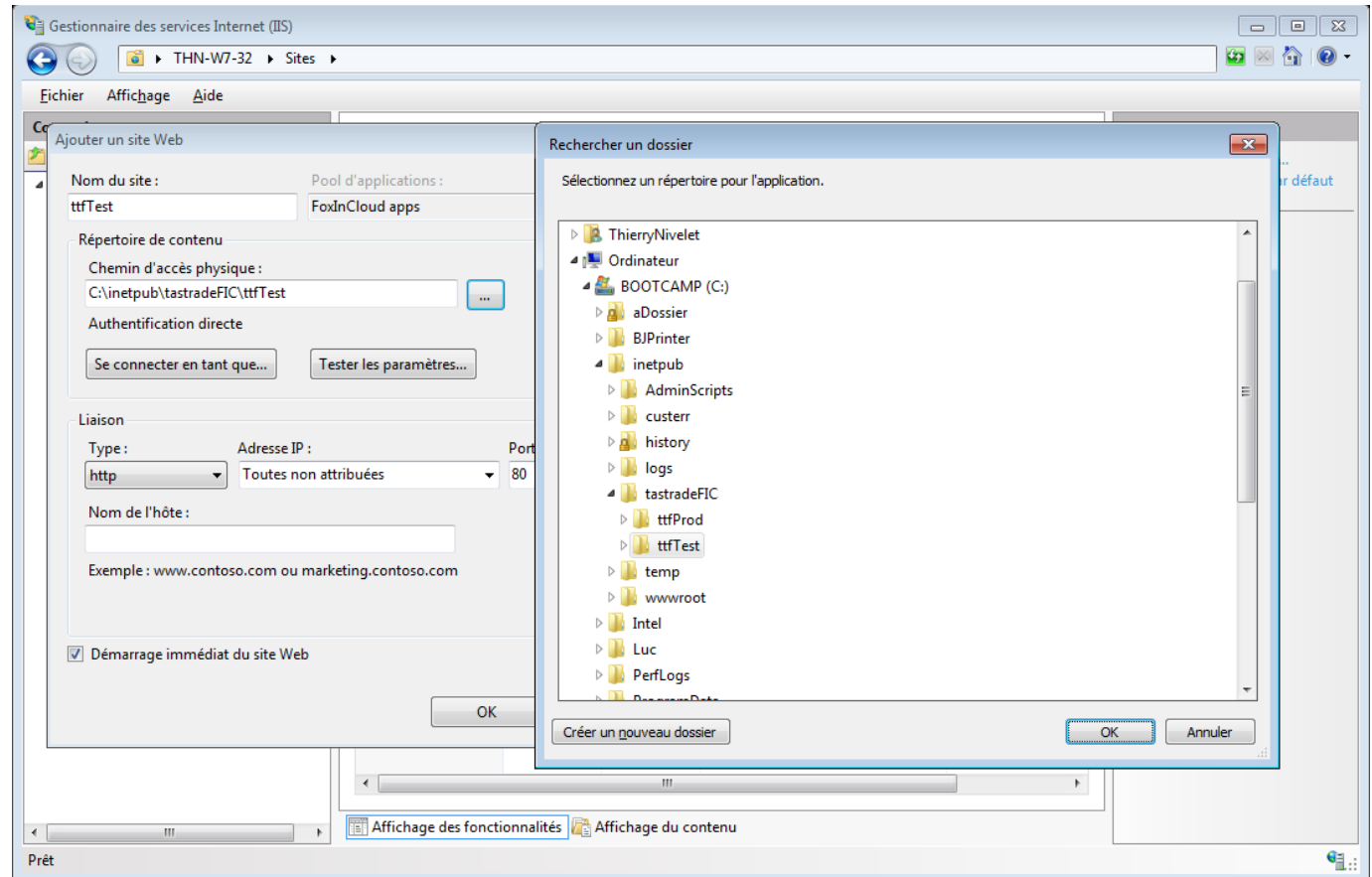
For simplicity, name it according to your source project (xxxTest | xxxProd)





Point site to the folder you just copied

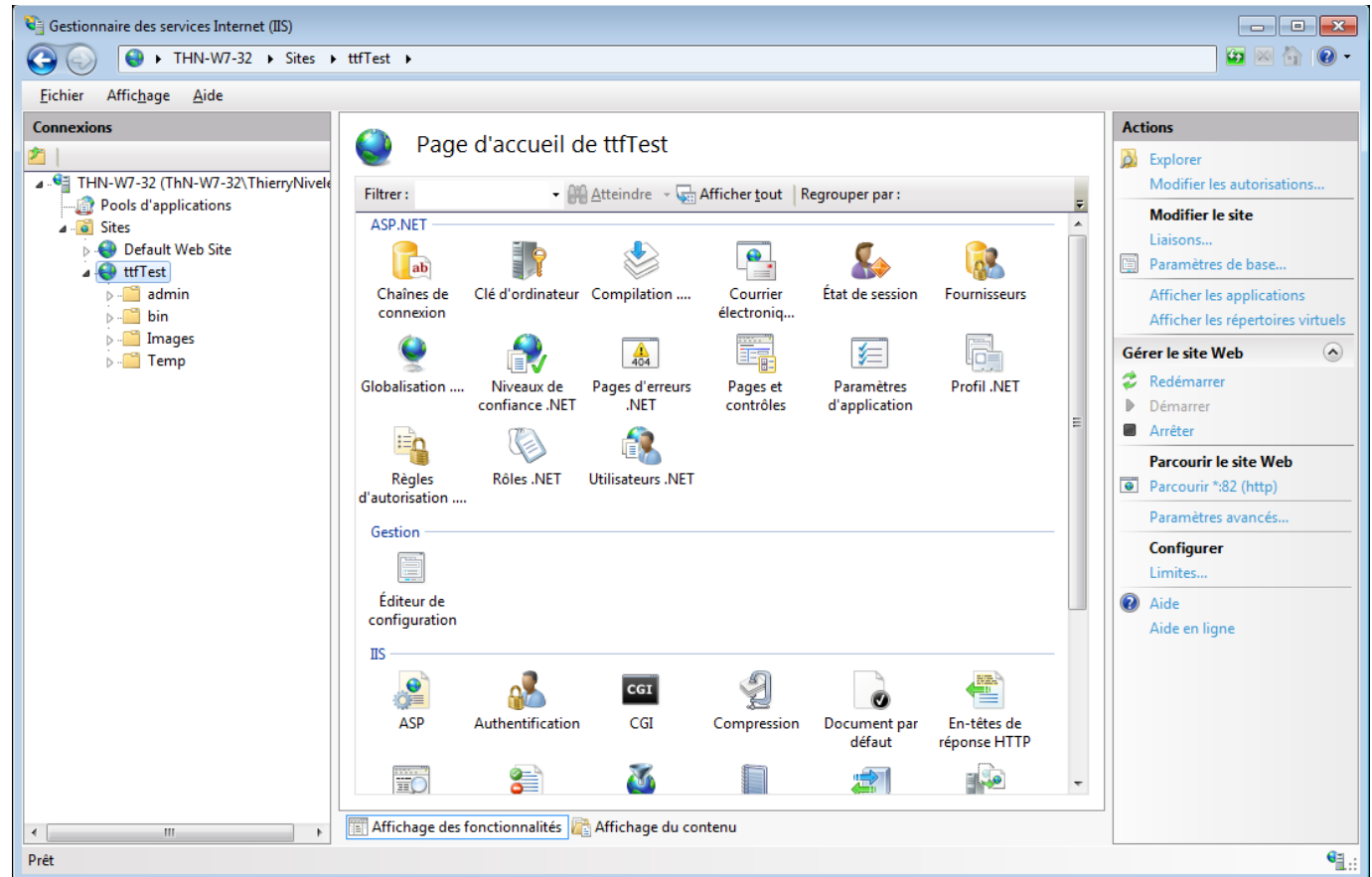
Site root folder is one of the 2 sub-folders you've just created in `inetpub\`





Site is created

New site shows the folder contained in inetpub sub-folder.





Site responds (default home page)

Default home page is [index.htm](#) that FAA has build for you in step 3-publish;

(will be replaced in a next step)

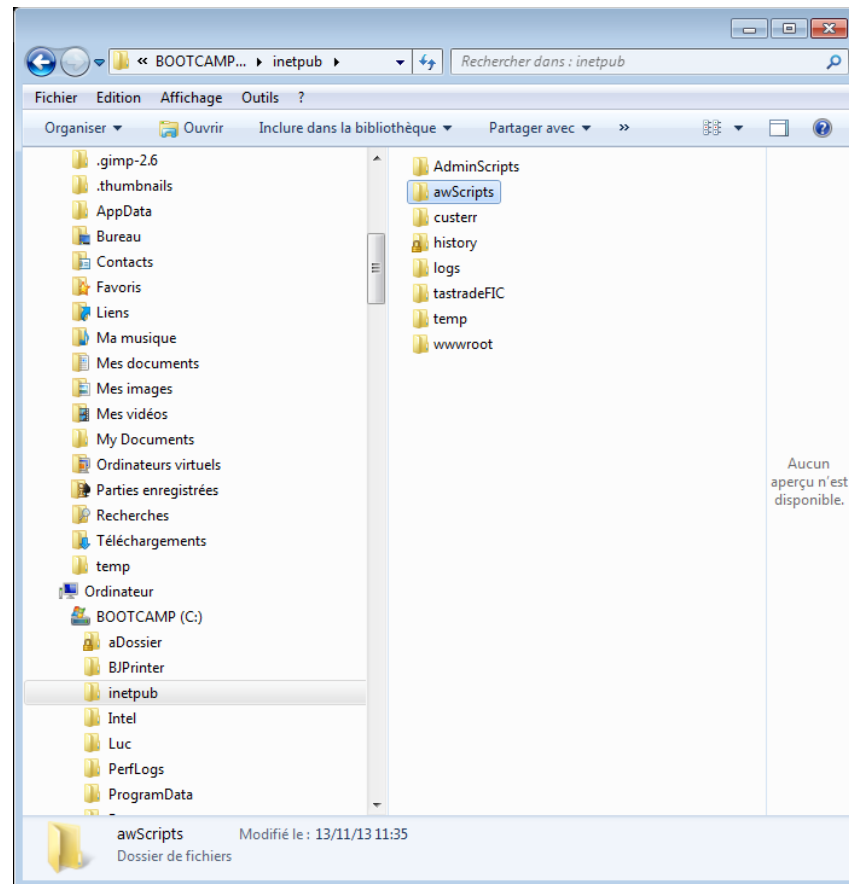




Create FoxInCloud script folder

In
`inetpub\`,
add a
folder
named
`awScripts`.

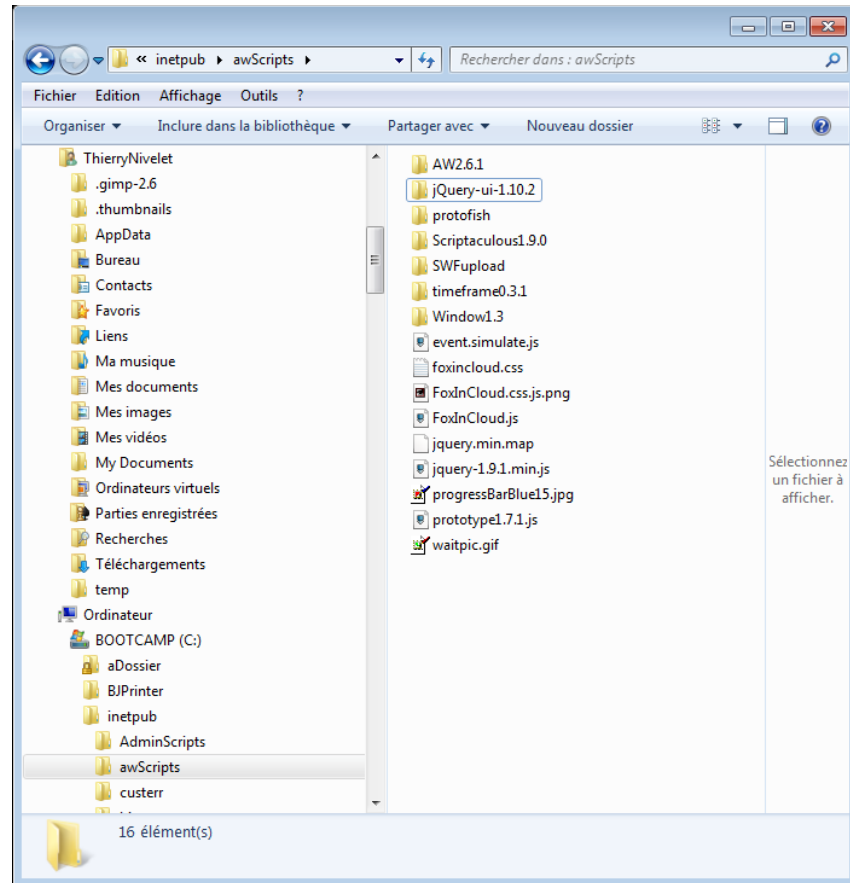
Following FiC's
naming
convention,
'awScripts'
means
'standard
FoxInCloud
CSS and JS'





Copy FoxInCloud *.css & *.js
into inetpub\awScripts\

Copy the contents of
<VFP9>
\Tools\AB
\AW
\Scripts\
from your
dev.
machine to
your server,
EXCEPT
_Source
folder
containing
© code.

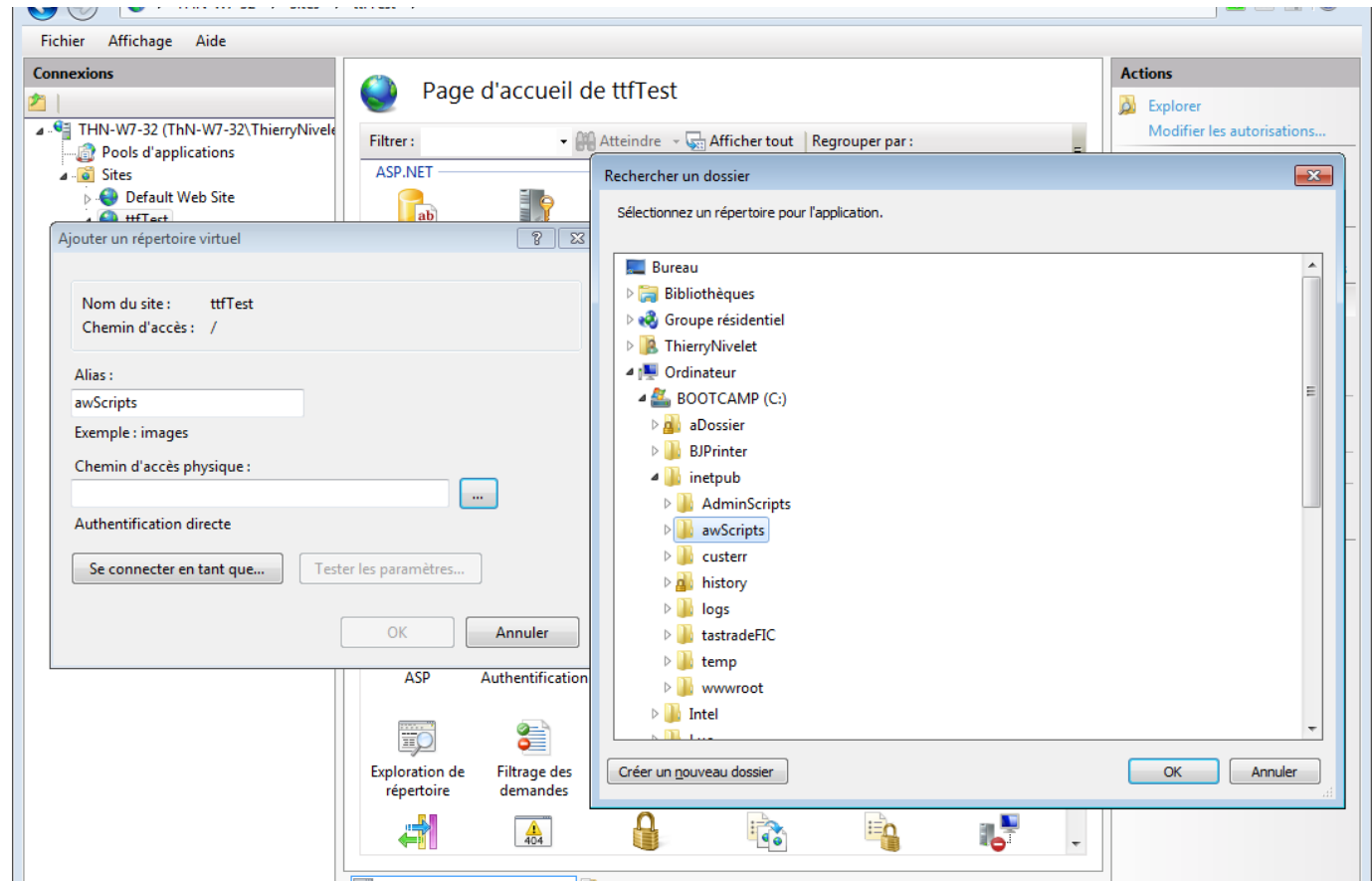




Create /awScripts/ virtual directory at site root

Create a
virtual
directory
alias
`awScripts`
at the root
of your site.

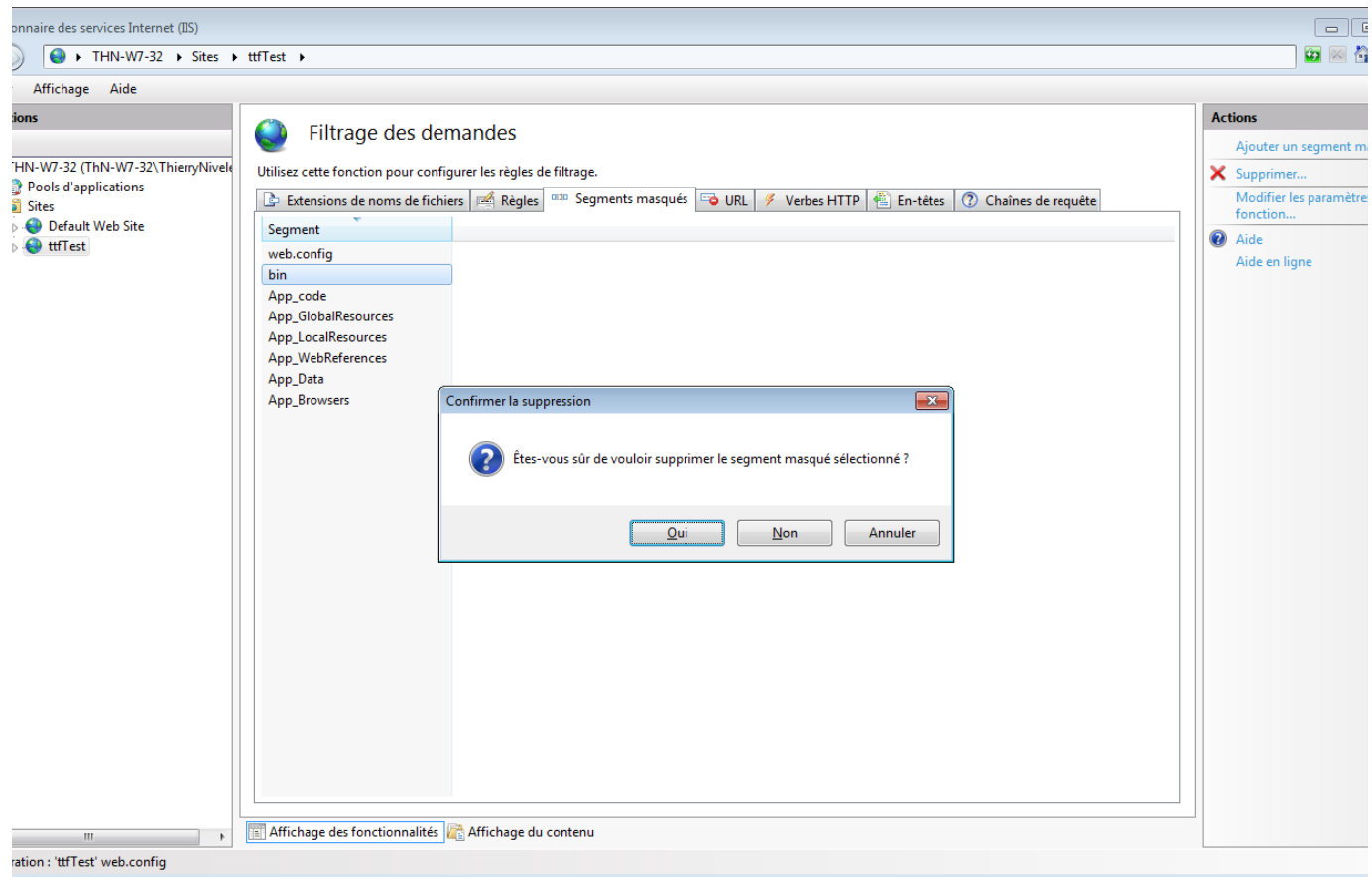
(though you
can configure
another
address, this
default location
is
recommended)





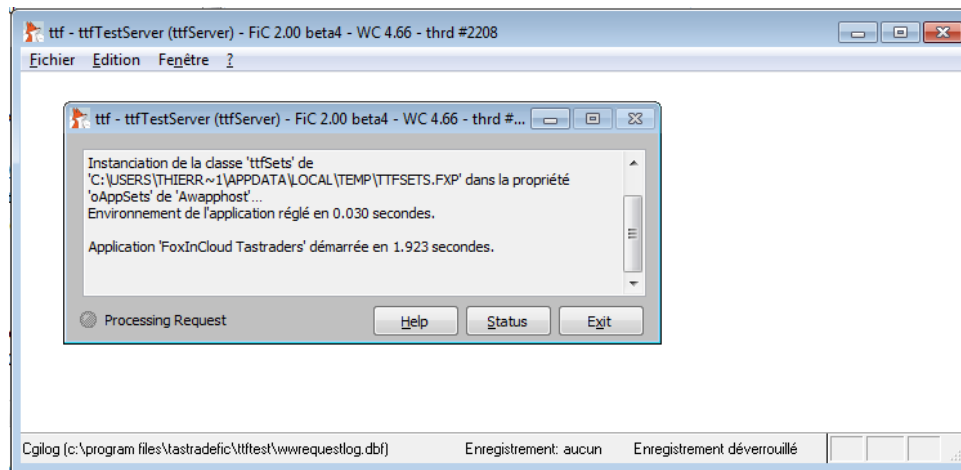
Allow requests on /bin/*

At your server or site root, open the 'request filtering' feature and remove 'bin' from the list of hidden segments.



Session 4, episode 2

Creating your Web Application

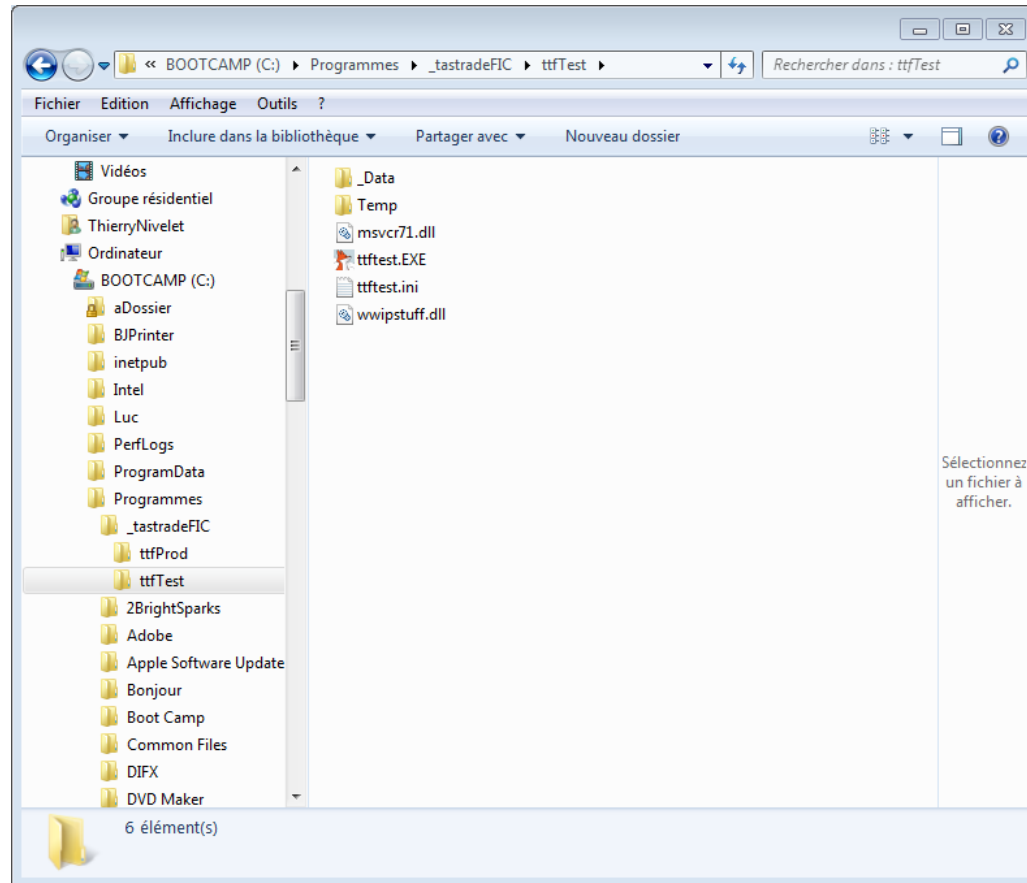




Copy program files

Copy your VFP

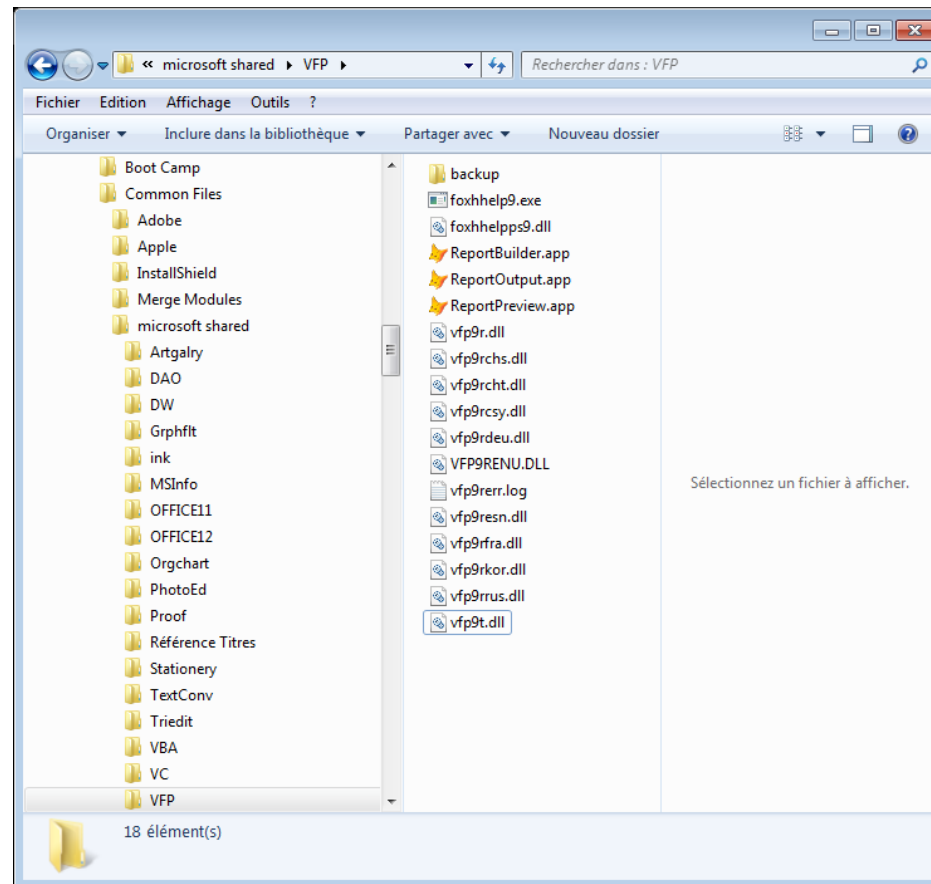
*.exe /
*.ini, a couple of
*.dll, your app
resources
(data,
images,
reports, ...)
and a
Temp\
folder.





Install VFP9*.dll

You can
deploy
VFP9*.dll
either your
application's
folder, or in
the standard
shared folder
(recommen
ded)





Register your VFP exe as a COM server

Run
your.exe
/regserver
to register
your app's
COM
object.

(on your dev
machine, VFP
auto registers
your COM server
upon each
BUILD EXE)

```
ca. Administrateur : C:\Windows\system32\cmd.exe
Microsoft Windows [version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. Tous droits réservés.

C:\Users\ThierryNivelet>cd c:\program files
c:\Program Files>cd tastradeFIC\ttfTest
c:\Program Files\tastradeFIC\ttfTest>dir *.exe
Le volume dans le lecteur C s'appelle BOOTCAMP
Le numéro de série du volume est 1005-FCFA

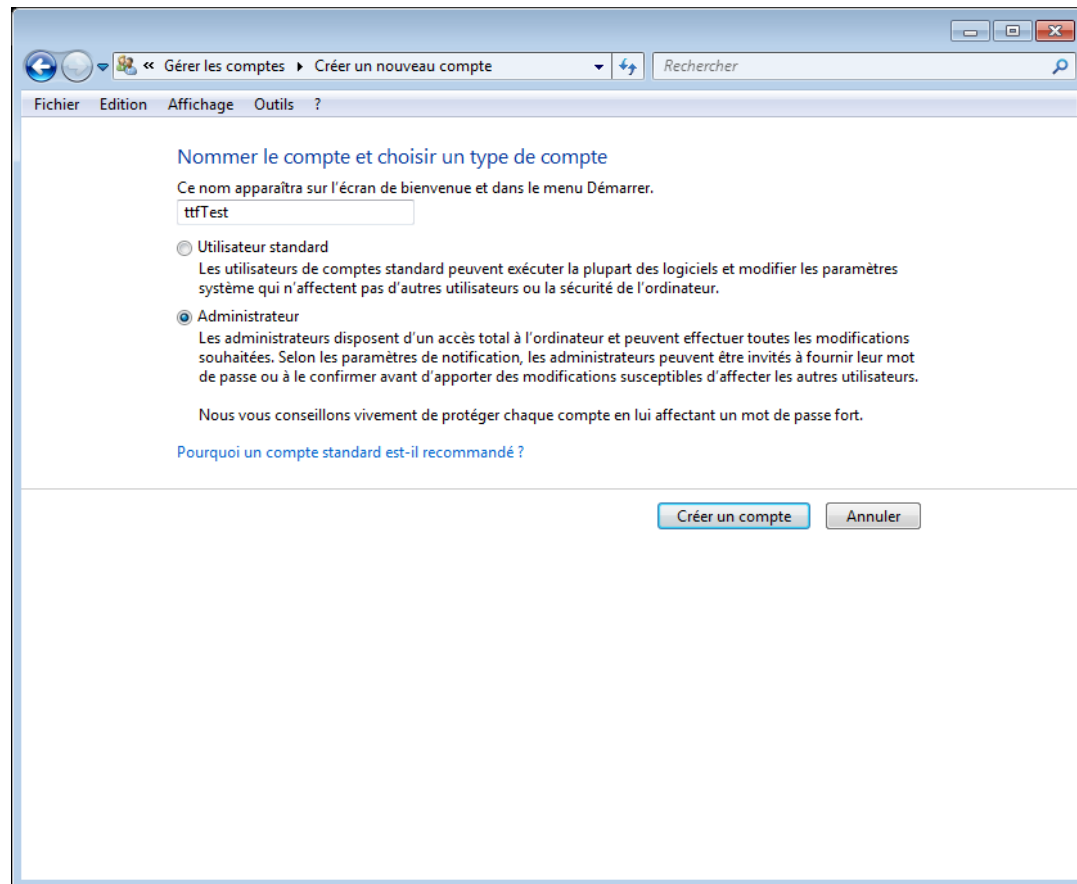
Répertoire de c:\Program Files\tastradeFIC\ttfTest
13/11/13  10:16                9 902 272  tftest.EXE
             1 fichier(s)          9 902 272 octets
             0 Rép(s)          9 473 130 496 octets libres

c:\Program Files\tastradeFIC\ttfTest>tftest.exe /regserver
```



Create a dedicated user

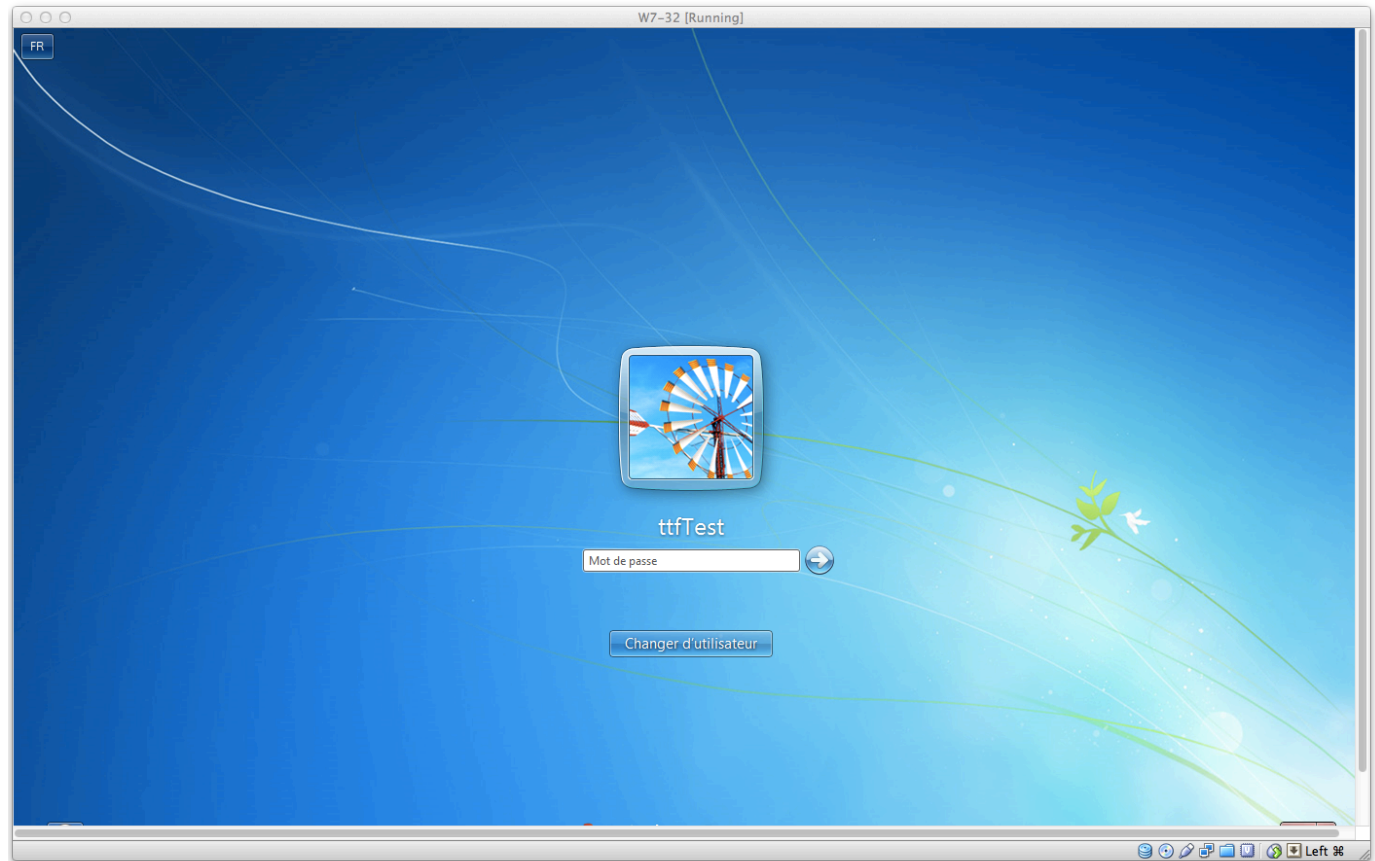
Each instance of your web app. should run under a dedicated user account named similarly.





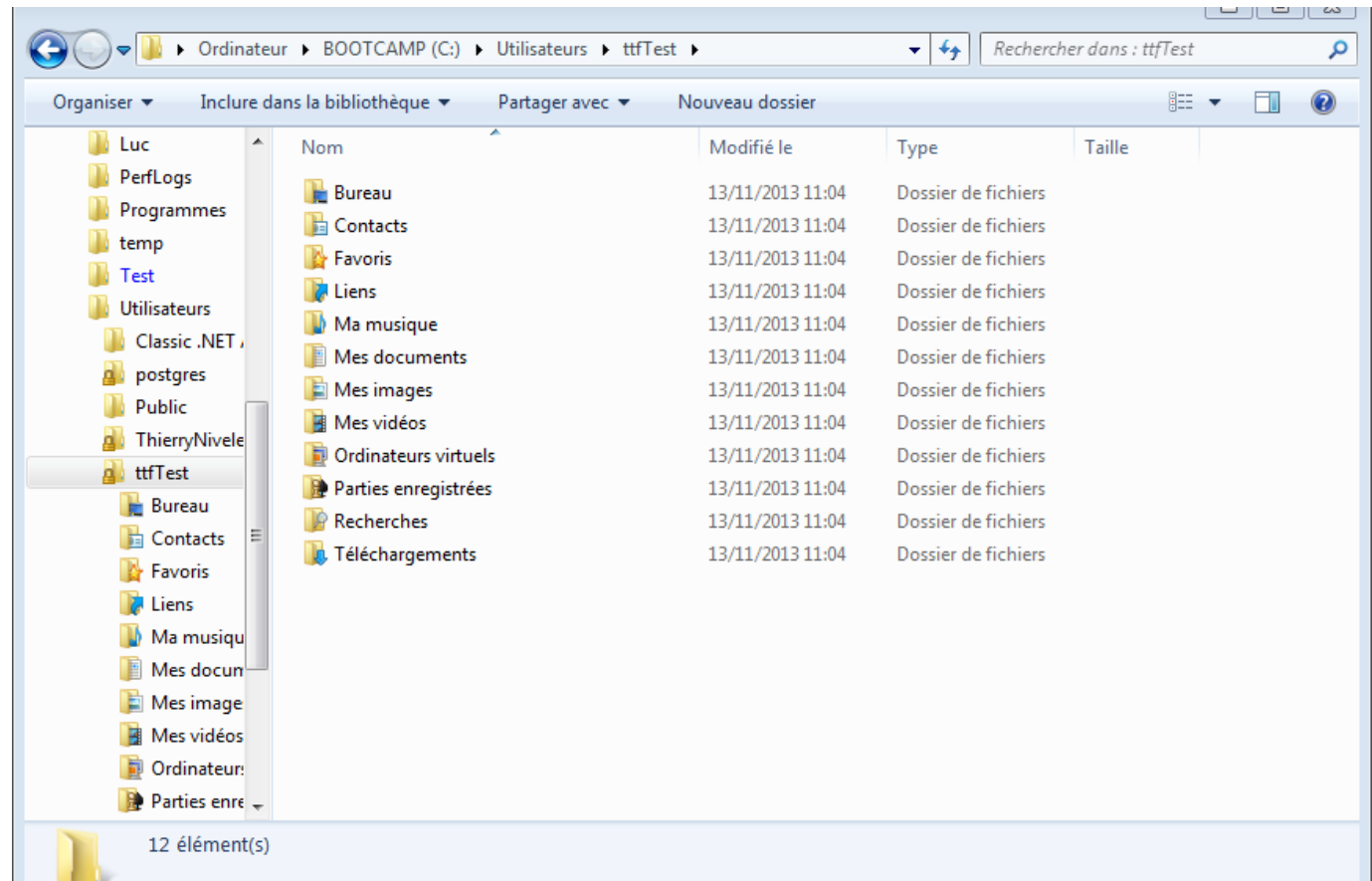
Open a session for this dedicated user

Opening a session ensures the creation of a workspace & temp folder where the app. will work into.



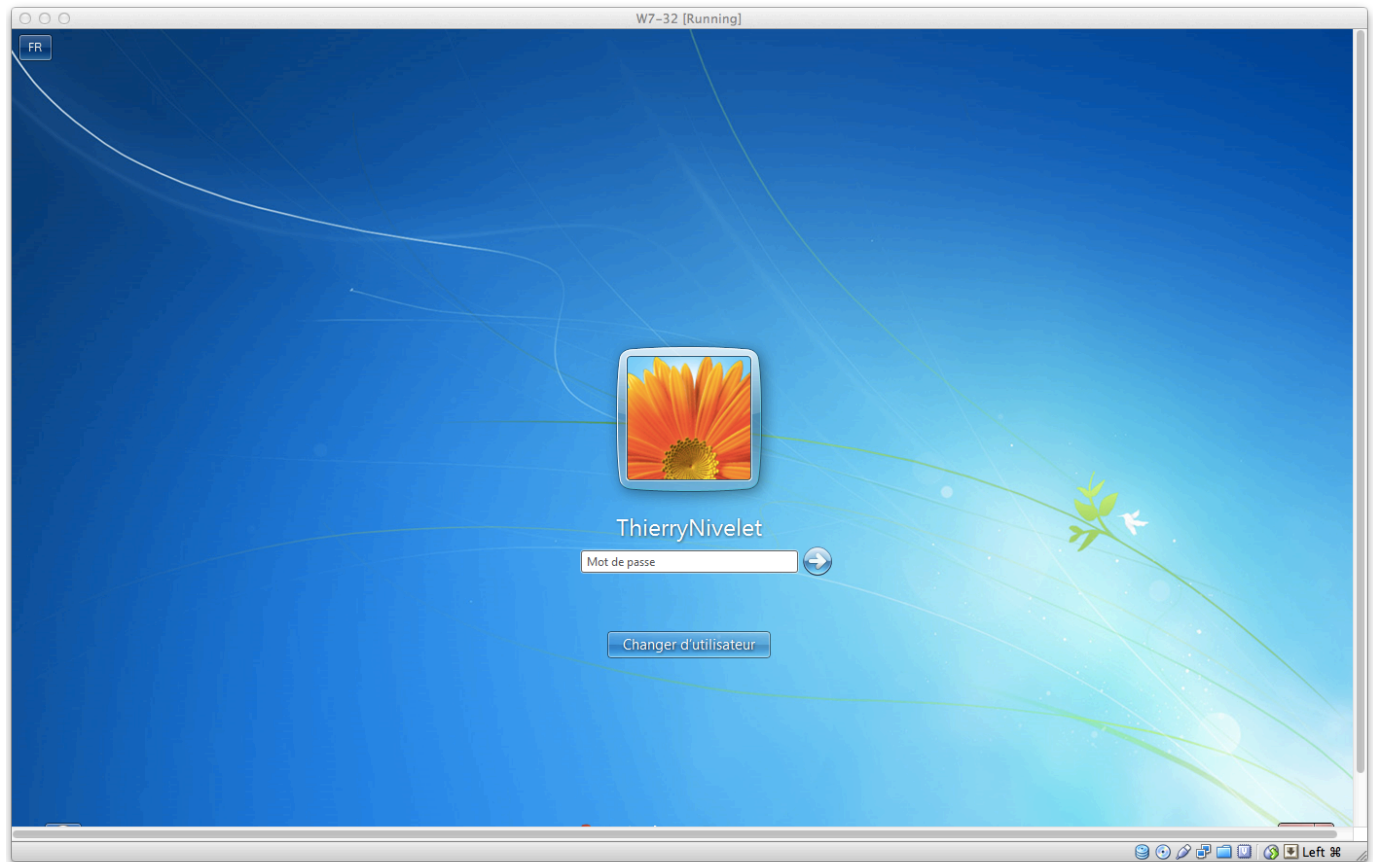


Dedicated user's workspace is created





Get back to your session

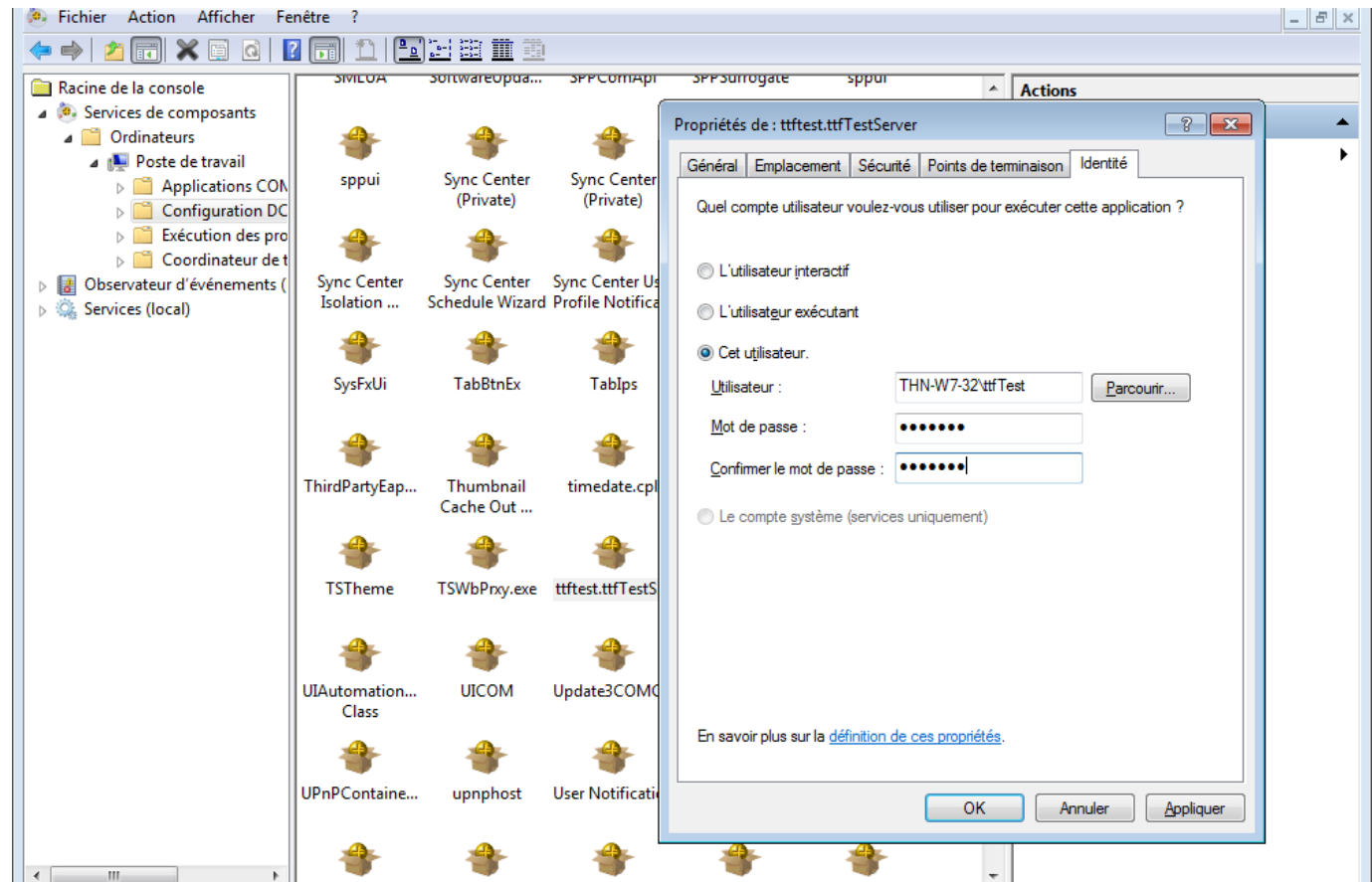


Any question? Post with screenshot in the 'FoxInCloud' section of <http://west-wind.com/wwThreads/> or <http://www.universalthread.com/>



Set your app COM object to run as the user just created

Run `dcomcnfg`, select your COM server and set identity to the user you just created.



Session 4, episode 3

Linking Web site and Web app





Adjust contents in wc.ini & xxxTest | Prod.ini

Adjust the
the various
pathes to
your
production
server
install, fill
out your
customer,
admin and
FAS IDs and
keys

```
File Edit Selection Find View Goto Tools Project Preferences Help
ttftest.ini x wc.ini x
1 ; .INI FILE FOR WC.DLL
2 ; =====
3
4 ; wc.dll reads this file once at startup, and each time you press the
5 ; 'Update DLL INI File' button in the 'Editing Config Files' form
6 ; (admin.asp > 'Edit configuration files' ../wc.dll?wwMaint~EditConfig)
7
8 ; Comments in this file originate partly from web connect documentation,
9 ; partly from FoxInCloud to ease server setup. You obviously can delete or
10 ; simplify these comments when your application goes into production.
11
12 ; wConnect documentation about this file is titled "The wc.ini configuration file"
13
14 ; Everywhere in this file, you need to replace 'tft' by your application
15 ; code as explained in the FoxInCloud documentation:
16 ; http://foxincloud.com/How-to.php?HowTo=awServerDev
17
18 ; tftTest.exe means either the Test or Production version of
19 ; your FoxInCloud Server.
20
21 ; 'Test' and 'Development' are 2 different concepts for FoxInCloud:
22 ; you should have a Test server in your production environment to test
23 ; changes in your application before putting them into production for real users.
24
25 [wwcgi]
26
27 ; =====
28 ; BASE DEVELOPMENT SETTINGS
29 ; =====
30
31 Path=C:\Users\Public\FoxInCloudTemp\tft\
32 ; Full path to wConnect Temp files directory.
33 ; REQUIRED
```



Create script-mapped extension

Make sure ISAPI is allowed at server level. If you run Windows 64 bits, allow 32-bit apps at server level.

The screenshot shows the IIS Manager interface. The main window displays the 'Mappages de gestionnaires' page for the site 'tftTest'. Two dialog boxes are open:

- Ajouter un mappage de scripts:** This dialog is used to add a new script mapping. The 'Chemin des demandes' field contains '*.tft'. The 'Exécutable' field contains 'C:\inetpub\tastradeFIC\tftTest\bin\wc.dll'. The 'Nom' field contains 'tftTest'. A 'Restrictions des demandes...' button is visible at the bottom.
- Restrictions des demandes:** This dialog is used to specify the access required for the handler. The 'Mappage' tab is selected, and the 'Exécution' radio button is chosen under 'Spécifier l'accès requis par le gestionnaire'.

The background shows a list of mappings with columns for extension, status, type, and handler. The status column shows 'Activé' for all entries.

Extension	Statut	Type	Gestionnaire
*.exe	Activé	Fichier	CgiModule
*.stm	Activé	Fichier	ServerSideInclude...
*.shtm	Activé	Fichier	ServerSideInclude...
*.shtml	Activé	Fichier	ServerSideInclude...
*	Activé	Non défini	ProtocolSupport...
*	Activé	Non défini	ProtocolSupport...
*	Activé	Fichier ou dos...	StaticFileModule...



Script-mapped extension created

When clicking OK, allow the ISAPI module to execute.

Mappages de gestionnaires

Utilisez cette fonction pour indiquer les ressources, telles que les DLL et le code managé qui traitent les réponses pour des types de demandes spécifiques.

Nom	Chemin d'accès	État	Type de chemin	Gestionnaire	Type d'ent...
TRACEVerbHandler	*	Activé	Non défini	ProtocolSupport...	Héritée
OPTIONSVerbHandler	*	Activé	Non défini	ProtocolSupport...	Héritée
StaticFile	*	Activé	Fichier ou dos...	StaticFileModule...	Héritée
SimpleHandlerFactory-Integrated	*.ashx	Activé	Non défini	System.Web.UI.Si...	Héritée
SimpleHandlerFactory-ISAPI-2.0	*.ashx	Activé	Non défini	IsapiModule	Héritée
WebServiceHandlerFactory-Integrated	*.asmx	Activé	Non défini	System.Web.Servi...	Héritée
WebServiceHandlerFactory-ISAPI-2.0	*.asmx	Activé	Non défini	IsapiModule	Héritée
ASPClassic	*.asp	Activé	Fichier	IsapiModule	Héritée
PageHandlerFactory-Integrated	*.aspx	Activé	Non défini	System.Web.UI.Pa...	Héritée
PageHandlerFactory-ISAPI-2.0	*.aspx	Activé	Non défini	IsapiModule	Héritée
AXD-ISAPI-2.0	*.axd	Activé	Non défini	IsapiModule	Héritée
SecurityCertificate	*.cer	Activé	Fichier	IsapiModule	Héritée
ISAPI-dll	*.dll	Activé	Fichier	IsapiModule	Héritée
CGI-exe	*.exe	Activé	Fichier	CgiModule	Héritée
HttpRemotingHandlerFactory-rem-Integrated	*.rem	Activé	Non défini	System.Runtime...	Héritée
HttpRemotingHandlerFactory-rem-ISAPI-2.0	*.rem	Activé	Non défini	IsapiModule	Héritée
SSINC-shtm	*.shtm	Activé	Fichier	ServerSideInclude...	Héritée
SSINC-shtml	*.shtml	Activé	Fichier	ServerSideInclude...	Héritée
HttpRemotingHandlerFactory-soap-Integrated	*.soap	Activé	Non défini	System.Runtime...	Héritée
HttpRemotingHandlerFactory-soap-ISAPI-2.0	*.soap	Activé	Non défini	IsapiModule	Héritée
SSINC-stm	*.stm	Activé	Fichier	ServerSideInclude...	Héritée
ttfTest	*.ttf	Activé	Non défini	IsapiModule	Local
TraceHandler-Integrated	trace.axd	Activé	Non défini	System.Web.Han...	Héritée
WebAdminHandler-Integrated	WebAdmin.axd	Activé	Non défini	System.Web.Han...	Héritée
AssemblyResourceLoader-Integrated	WebResource.axd	Activé	Non défini	System.Web.Han...	Héritée



Redirect index.htm to index.xxx

'xxx' is your application code / that you've chosen during FAA step 3-Publish

The screenshot displays the IIS Manager interface for configuring an HTTP redirection. The left-hand pane shows the 'Connexions' tree with the following structure:

- THN-W7-32 (ThN-W7-32)\ThierryNivele
- Pools d'applications
- Sites
 - Default Web Site
 - tftTest
 - admin
 - bin
 - Images
 - Temp
 - index.htm

The main pane is titled 'Redirection HTTP' and contains the following configuration options:

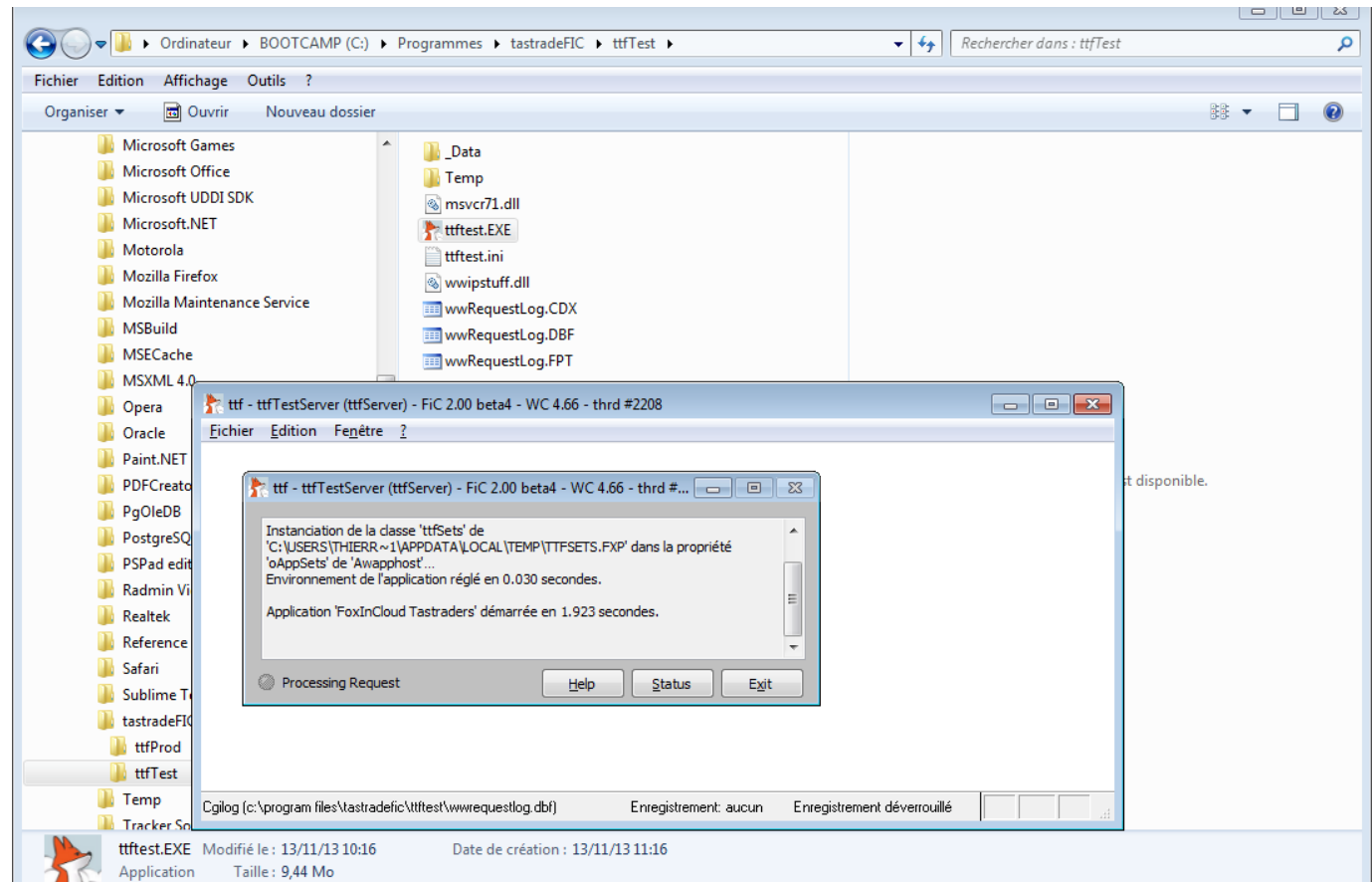
- Utilisez cette fonction pour définir les règles de redirection des demandes entrantes vers un autre fichier ou une autre URL.
- Rediriger les demandes vers cette destination :
 - Text box: index.ttf
 - Exemple : http://www.contoso.com/sales
- Rediriger le comportement
 - Rediriger toutes les dem. vers dest. exacte (et non par rapport à leur dest.)
 - Rediriger unique. les dem. vers contenu de ce rép. (pas les sous-rép.)
 - Code d'état : Permanent (301)

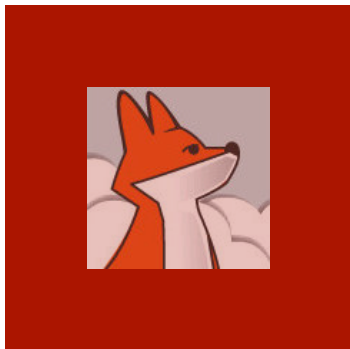
The right-hand pane shows an alert message: 'Les modifications ont été correctement enregistrées.' and action buttons: 'Appliquer', 'Annuler', 'Aide', and 'Aide en ligne'.



Run your server as plain exe (file mode)

Running your xxxTest | Prod.exe is just like running your server from the IDE: both use wConnect 'file' mode





Site home page responds





Form displayed from menu

The screenshot shows a web browser window with the URL `localhost:82/wFormStandardPage.ttf?awForm=customers.scx`. The page displays a table of customer data and a detailed form for editing a specific customer's information.

company	contact	contact title	phone	city	address
Alfreds Futterkiste	Maria Anders	Sales Repres...	030-0074321	Berlin	Obere Str.
Ana Trujillo Empa...	Ana Trujillo	Owner	(5) 555-4729	México ...	Avda. de la
Antonio Moreno T...	Antonio Moreno	Owner	(5) 555-3932	México ...	Mataderos
Around the Horn	Thomas Hardy	Sales Repres...	(71) 555-7788	London	120 Hanov
Berglunds snabb...	Christina Bergl...	Order Adminis...	0921-12 34 65	Luleå	Berguvsvä
Blauer See Delik...	Hanna Moos	Sales Repres...	0621-08460	Mannheim	Forsterstr.
Blondel père et fils	Frédérique Cite...	Marketing Man...	88.60.15.31	Strasbo...	24, place K
Bólido Comidas p...	Martin Sommer	Owner	(91) 555 22 82	Madrid	C/ Araquil

The detailed form below the table shows the following information:

Details

Company: Alfreds Futterkiste Phone: 030-0074321

Address: Obere Str. 57

Postal code: 12209 City: Berlin Country: Germany

Contact name: Maria Anders Min. amt: \$ 2,600.00 Save

Contact title: Sales Representative Discount: 2 Max. amt: \$ 6,300.00 Cancel

Print Close



Switch to COM mode

localhost:82/bin/wc.dll?_maintain~Load

Web Connection ISAPI Configuration

[Back to Admin Page](#) | [Re-Read Configuration](#) | [Recover Deadlock](#) | [Unload Servers](#) | [Load Servers](#) | [Load One Server](#)

DLL Version: Web Connection 4.67 (32 servers)
Current INI File: C:\inetpub\tastradeFIC\ttfTest\bin\wc.INI
File Template: wc_
Script Timeout: 600
Temp File Path: c:\users\public\foxincloudtemp\ttf\
Admin Account:
Current Login: Système

Messaging Mechanism: COM Mode | [File Mode](#)
POST Mechanism: URL Encoded
COM Server Loading: Sequential
Keep Alive: Force Keep Alive
Hold Requests: Servers running [Switch](#)
Lock: -1 Recursion: 0 Spin: 0

COM Servers	Hits	Active	Cumulative	Started	PID	Action
ttfTest.ttfTestServer	0	0 secs	0 secs	11:54 - 11/13/2013	5936	Kill

[Show this info as XML](#)



Form displays in COM mode

The screenshot shows a web browser window with the following content:

- Browser tabs: Web Connection ISAPI Configuration, Tastrate Customers - FoxInCloud Tas...
- Address bar: <http://localhost:82/wFormStandardPage.ttf?awForm=customers.scx>
- Page title: FoxInCloud Tastraders
- Table: Tastrate Customers - FoxInCloud Tastraders

company	contact	contact title	phone	city	address
Alfreds Futterkiste	Maria Anders	Sales Repres...	030-0074321	Berlin	Obere Str.
Ana Trujillo Empa...	Ana Trujillo	Owner	(5) 555-4729	México ...	Avda. de la
Antonio Moreno T...	Antonio Moreno	Owner	(5) 555-3932	México ...	Mataderos
Around the Horn	Thomas Hardy	Sales Repres...	(71) 555-7788	London	120 Hanow
Berglunds snabb...	Christina Bergl...	Order Adminis...	0921-12 34 65	Luleå	Berguvsväg
Blauer See Delik...	Hanna Moos	Sales Repres...	0621-08460	Mannheim	Forsterstr. ?
Blondel père et fils	Frédérique Cite...	Marketing Man...	88.60.15.31	Strasbo...	24, place K
Bóldo Comidas p...	Martin Sommer	Owner	(91) 555 22 82	Madrid	C/ Araquil, i

Details form for Alfreds Futterkiste:

Company: Alfreds Futterkiste | Phone: 030-0074321

Address: Obere Str. 57

Postal code: 12209 | City: Berlin | Country: Germany

Contact name: Maria Anders | Min. amt: \$ 2,600.00 | Save

Contact title: Sales Representative | Discount: 2 | Max. amt: \$ 6,300.00 | Cancel

Buttons: Print, Close

Footer: myCompany :: FoxInCloud



Our VFP exe runs in COM mode as our dedicated user

services.exe	Systeme	00	00:00:01	2 700 K	1 732 K
smss.exe	Système	00	00:00:00	52 K	52 K
SnippingTool.exe	ThierryNivelet	01	00:00:16	20 752 K	8 224 K
spoolsv.exe	Système	00	00:00:00	2 284 K	1 184 K
sppsvc.exe	SERVICE RÉSEAU	00	00:00:01	1 740 K	628 K
sublime_text.exe	ThierryNivelet	00	00:00:03	2 856 K	1 676 K
svchost.exe	Système	00	00:00:00	1 240 K	680 K
svchost.exe	Système	00	00:00:01	2 060 K	1 060 K
svchost.exe	SERVICE RÉSEAU	00	00:00:01	2 664 K	1 904 K
svchost.exe	SERVICE LOCAL	00	00:00:01	4 364 K	2 668 K
svchost.exe	Système	00	00:00:05	14 344 K	13 144 K
svchost.exe	SERVICE LOCAL	00	00:00:01	7 332 K	4 216 K
svchost.exe	Système	00	00:00:12	9 268 K	5 644 K
svchost.exe	SERVICE RÉSEAU	00	00:00:00	3 136 K	2 092 K
svchost.exe	SERVICE LOCAL	00	00:00:01	5 108 K	3 740 K
svchost.exe	Système	00	00:00:00	844 K	536 K
svchost.exe	SERVICE LOCAL	00	00:00:00	4 792 K	2 232 K
svchost.exe	Système	00	00:00:08	11 436 K	8 492 K
svchost.exe	SERVICE LOCAL	00	00:00:01	4 504 K	2 052 K
System	Système	00	00:00:14	52 K	40 K
taskhost.exe	ThierryNivelet	00	00:00:00	2 148 K	1 108 K
taskmgr.exe	ThierryNivelet	02	00:00:05	7 880 K	2 092 K
TCPSVCS.EXE	SERVICE LOCAL	00	00:00:00	228 K	156 K
ttfest.EXE	ttfest	00	00:00:02	26 360 K	14 884 K
VBoxService.exe	Système	00	00:00:00	1 668 K	848 K
VBoxTray.exe	ThierryNivelet	00	00:00:02	4 024 K	3 248 K
w3wp.exe	Système	00	00:00:00	8 396 K	4 720 K
w3wp.exe	ThierryNivelet	00	00:00:00	3 000 K	1 480 K



FoxInCloud app status

.../
foxincloud-
status.xxx is
your web
application
dashboard.

*This page will
include more
and more
functionalities
along future
FAS versions,
including
optimization.*

localhost:82/foxincloud-status.ttf

FoxInCloud Application 'FoxInCloud Tastraders' - Server status at {^2013-11-13 12:00:53}

FoxInCloud Application Server (FAS): Version '2.00 beta4' of {^2013-11-12 18:20:03}
Process ID: 6016
Objects: 186
Events: 15
Memory for user objects: 4,04 MB
VFP Temp Folder: 'C:\Windows\Temp\' - 154 Files
FAS Temp Folder: 'C:\Program Files\VFP9\Tools\AB\AW\Samples\Tastrade\Adapted\Temp\' - 30 Files

Users connected

None

FoxInCloud / wConnect DataSession # 1

2 Aliases used - Views: 0, Cursor: 0, Tables: 2

Alias	Work Area	Type	Updateable	FAS int.	Buffering	Fields	Records	Record Tags	Order()	File	Total size
cgilog	00001	Table	Yes	No	1	26	33	33	13	C:\Program Files\VFP9\Tools\AB\AW\Samples\Tastrade\Adapted\wwRequestLog.DBF	37,6 kB
wwsession	00002	Table	Yes	No	1	9	8	8	7	C:\Program Files\VFP9\Tools\AB\AW\Samples\Tastrade\Adapted\wwSession.dbf	39,6 kB

Application DataSession # 2

11 Aliases used - Views: 2, Cursor: 3, Tables: 6

Alias	Work Area	Type	Updateable	FAS int.	Buffering	Fields	Records	Record Tags	Order()	File	Total size	
awgrd	00001	Table	No	Yes	1	18	651	652	12	AWGRD	C:\Program Files\VFP9\Tools\AB\AW\AWGRD.DBF	348.6 kB
customer	00007	Table	Yes	No	1	15	92	92	2		C:\Program Files\VFP9\Tools\AB\AW\Samples_Data\customer.dbf	35.8 kB
employee	00006	Table	Yes	No	1	19	15	15	3		C:\Program Files\VFP9\Tools\AB\AW\Samples_Data\employee.dbf	335.2 kB
orders	00002	Table	Yes	No	1	18	1079	1	7		C:\Program Files\VFP9\Tools\AB\AW\Samples_Data\orders.dbf	279.5 kB
...	...	...	...	...	...	...	...	...	...	...	C:\Program Files\VFP9\Tools\AB\AW\...	167.3 kB

Any question? Post with screenshot in the 'FoxInCloud' section of <http://west-wind.com/wwThreads/> or <http://www.universalthread.com/>