

Push ..... 2

Push ..... 4

Push ..... 5

Push ..... 17

Push ..... 21

Push ..... 23



## Observer

- Queue , 가
- sdm 가
- ObserverID Interface , 가
- : Observer "\_ObserverImpl"

## Client Module

- Push

## Push

<b>bin</b>	ozpushcntrl.bat	(.bat)	(.sh)	Push
	ozpushcntrl.sh			
	ozpushstart.bat	(.bat)	(.sh)	Push
	ozpushstart.sh			
	ozpushstop.bat	(.bat)	(.sh)	Push
	ozpushstop.sh			
	OZServicePS.exe			
	OZPushServerInstallService.bat	NT		
	OZPushServerUninstallService.bat		Push	NT
	pushserver.ico	Push		
<b>conf</b>	pushserver.properties	Push		
	pushserver.xml	Push	session,	transmission, Observer
<b>lib</b>	crimson.jar	XML		
	log4j.jar			
	ozpush51.jar	Push		
	ozsfw51.jar			
	OZServiceBootstrap.jar	NT		
	OZUSLClientSession.jar	USL		
	parser.jar	XML		
	sample.jar	Observer		
	xalan.jar	XML Xerces		
	xerces.jar	XML Xerces		
	xercesImpl.jar	XML Xerces		
	xml-apis.jar	XML Xerces		
<b>license</b>	ozlicense.xml	Push		
<b>logs</b>	pushserver.log	Push		

## Push

Push

Push                      ozlicense.xml                      Push    가  
 License  
 ,            IP            ,                      Push  
 IP                      가

## Push

### ■ ozpushcntrl.bat

JRE                      Push  
 Windows                      JVM                      , UNIX  
 ozpushcntrl.sh                      JRE Path

```
@echo off
rem -----
rem
rem                      OZ Push Server Contorl(OZA SHELL)
rem
rem This script file written and tested under Windows 2000
rem
rem User should set following variables:
rem
rem JAVA_HOME                      - Determines the version of Java used to start
rem                                      OZ Server. This variable must point to the
rem                                      root directory of a JDK or JRE installation.
rem                                      for an up-to-date list of supported JVMs your platform.
rem MAX_MEMORY                      - Maximum memory used by OZ Push Server. (The unit is mega-byte.)
```

```
rem  MIN_MEMORY      - Minimum memory used by OZ Push Server. (The unit is mega-byte.)
rem
rem  -----
rem  -----
rem  Set user-defined variables
rem  -----

set JAVA_HOME=.. .. JRE
set MAX_MEMORY=256
set MIN_MEMORY=256
set JAVA_OPTION=

set OZPUSHSERVER_HOME=..
set OZLIBALL=%OZPUSHSERVER_HOME% lib

rem  -----
rem  OZ Main Class
rem  -----
set OZLIB=%OZLIBALL%  ozpush51.jar;%OZPUSHSERVER_HOME% conf ;

rem  -----
rem  OZ Server Class
rem  -----
set OZLIB=%OZLIB%;%OZLIBALL%  ozsfw51.jar

rem  -----
rem  Library for Logging
rem  -----
set OZLIB=%OZLIB%;%OZLIBALL%  log4j.jar

rem  -----
rem  Library for XML
rem  -----
set OZLIB=%OZLIB%;%OZLIBALL%  xalan.jar
set OZLIB=%OZLIB%;%OZLIBALL%  xercesImpl.jar
set OZLIB=%OZLIB%;%OZLIBALL%  xml-apis.jar
set OZLIB=%OZLIB%;%OZLIBALL%  parser.jar
set OZLIB=%OZLIB%;%OZLIBALL%  xerces.jar
set OZLIB=%OZLIB%;%OZLIBALL%  crimson.jar

rem  -----
rem  USL Jar for USL
rem  -----
```

```

set OZLIB=%OZLIB%;%OZLIBALL%  OZUSLClientSession.jar

rem -----
rem      NT Service Class
rem -----
set OZLIB=%OZLIB%;%OZLIBALL%OZServiceBootstrap.jar

rem -----
rem      User Library
rem -----
rem set OZLIB=%OZLIB%;%OZLIBALL%  sample.jar

echo %OZLIB%

if not "%1" == "-start" goto notStart
set JAVA_OPTION= %JAVA_OPTION% -Xms%MIN_MEMORY%m -Xmx%MAX_MEMORY%m
:notStart
%JAVA_HOME% bin java %JAVA_OPTION% -cp %OZLIB% oz.push.server.Console %1 %2 %3 %4
    
```

```

: MAX_MEMORY, MIN_MEMORY          JVM
/
,          JAVA_OPTION
.          JAVA_OPTION
    
```

■ **ozpushcntrl.sh**

```

JRE      Push
Windows          JVM
ozpushcntrl.sh  JRE Path
, UNIX
    
```

```

#!/bin/sh
#-----
#
#      OZ Push Contorl.
#
# This script file written and tested under HP-UX
#
# User should set following variables:
#
# JAVA_HOME      - Determines the version of Java used to start
#                OZ Server. This variable must point to the
#                root directory of a JDK or JRE installation.
    
```

```
#          for an up-to-date list of supported JVMs your platform.
# MAX_MEMORY   - Maximum memory used by OZ Server. (The unit is mega-byte.)
# MIN_MEMORY   - Minimum memory used by OZ Server. (The unit is mega-byte.)
# JAVA_OPTIONS - On some platforms, certain java command-line options are
#               recommended when running OZ Server.
#
#-----

# -----
#   Set user-defined variables
# -----

JAVA_HOME=../../jre
MAX_MEMORY=256
MIN_MEMORY=128
JAVA_OPTION=-hotspot

OZPUSHSERVER_HOME=..
OZLIB=.:$OZPUSHSERVER_HOME/conf
OZLIB=$OZLIB:$OZPUSHSERVER_HOME/lib/ozpush51.jar

# -----
#       OZ Server Library
# -----
OZLIB=$OZLIB:$OZPUSHSERVER_HOME/lib/ozsfw51.jar

# -----
#       Library for Logging
# -----
OZLIB=$OZLIB:$OZPUSHSERVER_HOME/lib/log4j.jar

# -----
#       Library for XML
# -----
OZLIB=$OZLIB:$OZPUSHSERVER_HOME/lib/xalan.jar
OZLIB=$OZLIB:$OZPUSHSERVER_HOME/lib/xercesImpl.jar
OZLIB=$OZLIB:$OZPUSHSERVER_HOME/lib/xml-apis.jar
OZLIB=$OZLIB:$OZPUSHSERVER_HOME/lib/parser.jar
OZLIB=$OZLIB:$OZPUSHSERVER_HOME/lib/xerces.jar
OZLIB=$OZLIB:$OZPUSHSERVER_HOME/lib/crimson.jar

# -----
#       USL Jar for USL
```

```
# -----
set OZLIB=%OZLIB%;%OZLIBALL% OZUSLClientSession.jar

# -----
#       User Library
# -----
# set OZLIB=%OZLIB%;%OZLIBALL% sample.jar

if [ "$1" != "-start" ]; then
    JAVA_OPTION=
else
    JAVA_OPTION="$JAVA_OPTION -ms$MIN_MEMORY"m
    JAVA_OPTION="$JAVA_OPTION -mx$MAX_MEMORY"m
fi

echo ""
echo $OZLIB
echo ""

$JAVA_HOME/bin/java $JAVA_OPTION -classpath $OZLIB oz.push.server.Console $1 $2 $3 $4
```

```
          : MAX_MEMORY, MIN_MEMORY          JVM
          /                               ,   JAVA_OPTION
          .                               .   JAVA_OPTION
```

## Push

```

          Push                               Push       bin
ozpushstart.bat                               ,   Push   ozpushstop.bat
          .
UNIX
ozpushstart.sh                               ,   Push   bin
          .                               .   Push   ozpushstop.sh

■ ozpushstart.bat/ozpushstart.sh
ozpushstart.bat       ozpushstart.sh       ozpushcntrl.bat       ozpushcntrl.sh
          Push
```

- ozpushcntrl.bat

```
@echo off
rem -----
rem
rem          OZ Push Server Start-up File
rem
rem This batch file written and tested under Windows 2000
rem check your path indicate <JAVA_HOME> bin
rem
rem -----

ozpushcntrl.bat -start %1
```

- ozpushcntrl.sh

```
# -----
#
#          OZ Push Server Start-up File
#
# This batch file written and tested under UNIX(HP-UX) System
# check your path indicate <JAVA_HOME>/bin
#
# -----

./ozpushcntrl.sh -start $1
```

## Push

Push



CLASSPATH가

```
NT { Push
    }\bin\OZPushServerInstallService.bat ,
{ Push }\bin\ OZPushServerUnInstallService.bat
```

- OZPushServerInstallService.bat

Push

Push 가

JRE

```
@echo off

rem -----
rem OZPushServer Service Install Register Batch File
rem -----

rem -----
rem      JRE Path
rem
rem ex) set JRE_PATH=C:\Program Files\Forc\OZ Xstudio
5.1\jre\bin\hotspot\jvm.dll
rem -----
set JRE_PATH=C:\Program Files\Forc\OZ Xstudio 5.1\jre\bin\hotspot\jvm.dll

rem -----
rem      OZ PushServer Home
rem
rem ex) set OZPUSHSERVER_HOME_BIN=C:\Program Files\Forc\OZ Xstudio 5.1\OZ
Push Server 5.1\bin
rem -----
set OZPUSHSERVER_HOME=.
set OZPUSHSERVER_HOME_BIN=C:\Program Files\Forc\OZ Xstudio 5.1\OZ Push
Server 5.1\bin

rem JAVA option delimiter is # or ;
set JAVA_OPTION=

set MAX_MEMORY=256
set MIN_MEMORY=128

if not "%OZPUSHSERVER_HOME%" == "" goto start
echo Unable to determine the value of OZSERVER_HOME.
goto eof

if not "%OZPUSHSERVER_HOME_BIN%" == "" goto start
echo Unable to determine the absolute path value of OZSERVER_HOME_BIN.
goto eof
```

```
if not "%JRE_PATH%" == "" goto start
echo Unable to determine the absolute path value of JRE_PATH
goto eof

:start

set OZLIBALL=%OZPUSHSERVER_HOME%\lib

rem -----
rem     OZ Main Class
rem -----
set OZLIB=%OZLIBALL%\ozpush51.jar; %OZPUSHSERVER_HOME%\conf\

rem -----
rem     OZ NT Service Bootstrap
rem -----
set OZLIB=%OZLIB%; %OZLIBALL%\OZServiceBootstrap.jar

rem -----
rem     OZ Server Class
rem -----
set OZLIB=%OZLIB%; %OZLIBALL%\ozsfw51.jar

rem -----
rem     Library for Logging
rem -----
set OZLIB=%OZLIB%; %OZLIBALL%\log4j.jar

rem -----
rem     Library for XML
rem -----
set OZLIB=%OZLIB%; %OZLIBALL%\xalan.jar
set OZLIB=%OZLIB%; %OZLIBALL%\xercesImpl.jar
set OZLIB=%OZLIB%; %OZLIBALL%\xml-apis.jar
set OZLIB=%OZLIB%; %OZLIBALL%\parser.jar
set OZLIB=%OZLIB%; %OZLIBALL%\xerces.jar
set OZLIB=%OZLIB%; %OZLIBALL%\cricmsn.jar

rem -----
rem     USL Jar for USL
rem -----
```

```

set OZLIB=%OZLIB%; %OZLIBALL%\OZUSLClientSession.jar

rem -----
rem      User Library
rem -----
set OZLIB=%OZLIB%; %OZLIBALL%\sample.jar

echo %OZLIB%

OZServicePS.exe //IS/OZPushServer --DisplayName="OZPushServer" --
Description="OZPushServer" --StartPath="%OZPUSHSERVER_HOME_BIN%" --
StopPath="%OZPUSHSERVER_HOME_BIN%" --Classpath="%OZLIB%" --Jvm="%JRE_PATH%"
--JavaOptions="%JAVA_OPTIONS%" --JvmMs="%MIN_MEMORY%" --JvmMx="%MAX_MEMORY%"
--StartMode=jvm --StopMode=jvm --StartClass=oz.server.OZServiceBootstrap --
StartParams=OZPushServerStart --StopClass=oz.server.OZServiceBootstrap --
StopParams=OZPushServerStop --LogPath="%OZPUSHSERVER_HOME_BIN%" --
LogLevel=DEBUG

: eof
    
```

<b>--Classpath</b>		Push
<b>--Description</b>		( 1024 .)
<b>--DisplayName</b>		( : ServiceName) :
<b>--Jvm</b>		가 jvm.dll ( : C:\j2sdk1.4.2_12\jre\bin\client\jvm.dll)
<b>--JvmMs</b>		Initial Memory ( : MB)
<b>--JvmMx</b>		( : MB)
<b>--JvmOptions</b>		Jvm ( : -Xrs)
<b>--JvmSs</b>		( : KB)
<b>--LogLevel</b>		
	<b>ERROR</b>	log level , log

		<b>WARN</b>	"ERROR" level log log
		<b>INFO</b>	"ERROR" level log ( ) log
		<b>DEBUG</b>	"ERROR", "INFO" level log log
<b>--LogPath</b>			
<b>--LogPrefix</b>			( : OZService) ) 가 "OZ" "OZ_yyyyMMdd.log"
<b>--StartClass</b>		<b>oz.server.OZService Bootstrap</b>	Push
<b>--StartMode</b>		<b>jvm</b>	Jvm
<b>--StartParams</b>		<b>OZPushServerStart</b>	Push
<b>--StartPath</b>			
<b>--StopClass</b>			
<b>--StopParams</b>			
<b>--StopPath</b>			
<b>--StdOutput</b>			)--StdOutput="stdout.log"
<b>--StdError</b>			)--StdOutput="stderr.log"
<b>--Startup</b>		<b>Manual</b>	. ( )
		<b>Auto</b>	.

- OZPushServerUnInstallService.bat

Push

```
@echo off
```

```

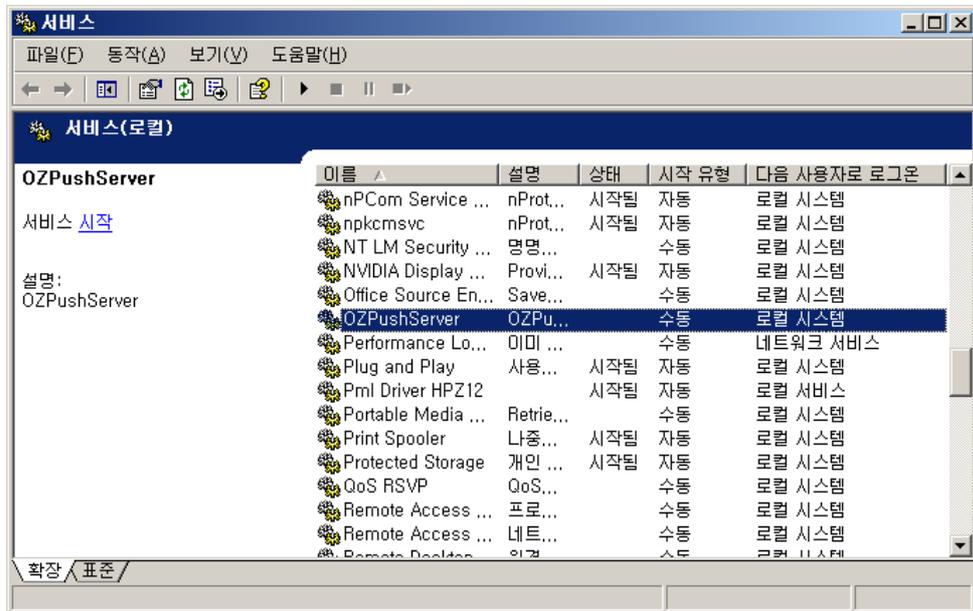
rem -----
rem OZPushServer Service Uninstall Register Batch File
rem -----

OZServicePS.exe //DS//OZPushServer
    
```

{ Push } \bin\OZPushServerInstallService.bat

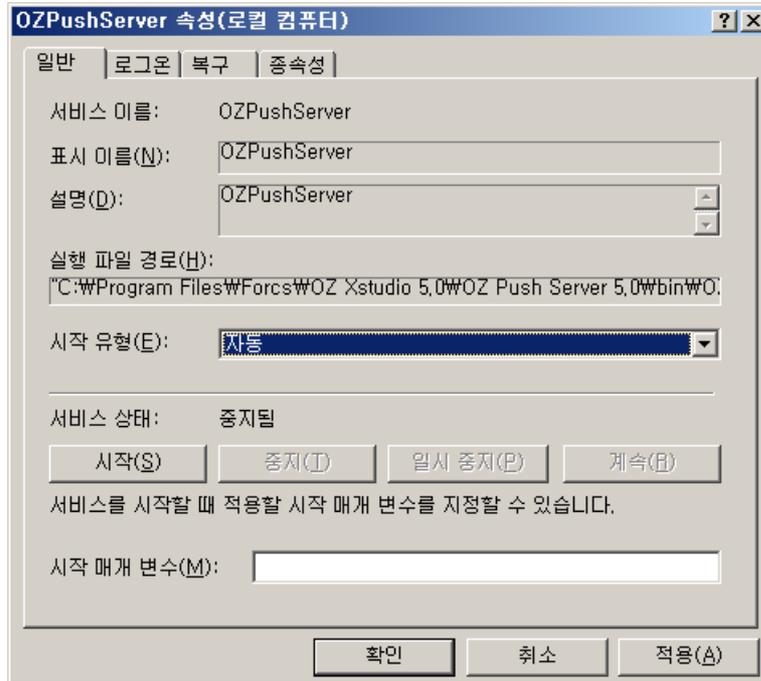
{ Push } \bin\OZPushServerUnInstallService.bat

Push 가 OZPushServer " " Push



OZPushServer

" " " "



Push

OZPushServer

” ”

## Push

### ■ pushserver.properties

Push

```
#-----
# Main configuration of OZ Push Server
#-----

path.oz.push.home=..
```

<b>path.oz.push.home</b>	Push 가 ) . ( /

### ■ pushserver.xml

Push , session, transmission, Observer

```
<?xml version="1.0" encoding="EUC-KR"?>
<ozpushserver port="8088">
  <log priority="DEBUG" path="..logs/">
    <logger type="Console" aync="false" />
    <!--
      DailyRollingFile - Use logger
      <logger type="DailyRollingFile" filename="pushserver.log" append="true" immediateFlush="true"
datepattern="yyyy-MM-dd" />
    -->
    <logger type="RollingFile" filename="pushserver.log" append="true" immediateFlush="true"
maxbackupindex="5" maxFileSize="10KB" />
  </log>
  <session interval='5000'/>
  <transmission multi='false'/>
  <observers>
  <!--
    registration of user-defined observer
    <observer name="OB1" classname="sample.observer.OB1" checkInterval="5000" />
    <observer name="OB2" classname="sample.observer.OB2" checkInterval="5000"/>
  -->
```

```
</observers>
</ozpushserver>
```

Element			
ozpushserver	port	Push . ( : 8088)	
	log	priority	. ( : DEBUG)
FATAL			가 , 가 .
ERROR			' .
INFO			"ERROR"
DEBUG			"ERROR", "INFO"
path	: %OZPushHome%\log) . (		
logger	type	: Console) . ( : Console RollingFile DaillyRollingFile Console	
		Console	.
		RollingFile	ex) pushserver.log, pushserver.log.1, pushserver.log.2, ...
		DaillyRollingFile	(DatePattern) . ex) pushserver.log, pushserver.log. , pushserver.log. , ...

	async	Console . ( : false)
	filename	RollingFile DaillyRollingFile pushserver.log) . ( :
	append	RollingFile DaillyRollingFile 가 가 . ( : true)
	immediateFlush	RollingFile DaillyRollingFile . ( : false)
	datepattern	DaillyRollingFile "DatePattern" . ( : YYYY-MM-DD)
	maxBackupIndex	RollingFile Backup 가 . ( : 5)
	maxFileSize	RollingFile . ( : 1MB)
	<b>session</b>	interval : 5000) . (
<b>transmission</b>	multi . ( : false)	
<b>Observer</b>	name	Observer .
	classname	Observer .
	checkInterval	. ( : 5000)

- DatePattern

yyyy-MM		6 12 pushserver.log pushserver.log.2005-06 pushserver.log

yyyy-ww	( )	가 , 1 12 pushserver.log pushserver.log.2005-01 pushserver.log
yyyy-MM-dd	( )	7 1 pushserver.log pushserver.log.2005-07-01 pushserver.log
yyyy-MM-dd-HH		7 1 10 pushserver.log pushserver.log.2005-07-01-09 pushserver.log

## Push

- **-help**

) ozpushcntrl -help

- **-obinfo**

ObserverID

ObserverID | ObserverName | ObserverClassName | client

) ozpushcntrl -obinfo ip: 127.0.0.1 port: 8088 id: ObserverID

- **-oblist**

ip Observer

ObserverID | ObserverName | ObserverClassName | client

) ozpushcntrl -oblist ip: 127.0.0.1 port: 8088

- **-obrunlist**

Observer

ObserverID | ObserverName | ObserverClassName | client

) ozpushcntrl -obrunlist ip: 127.0.0.1 port: 8088

- **-obstop**

ObserverID 가 Observer

) ozpushcntrl -obstop ip: 127.0.0.1 port: 8088 id: ObserverID

- **-stop**

OZ Push

) ozpushcntrl -stop ip: 127.0.0.1 port: 8088

- **-usage**

) ozpushcntrl -usage

- **-version**

Push

) ozpushcntrl -version -ip: 127.0.0.1 -port:8080

## Push

Push

### ■ DataModule.StartPush

**Prototype** bool StartPush(string ObserverIP, integer ObserverPort, string ObserverName)

Push

**Definition** : 가 SynchronizeToDataSet true

<b>Argument</b>	<i>ObserverIP</i>	Push	IP
	<i>ObserverPort</i>	Push	Port
	<i>ObserverName</i>	Push	Observer

### ■ DataModule.EndPush

**Prototype** bool EndPush()

Push

## Observer

가 Observer 가

1) 가 가

가 Push



```
<transmission multi='false'/>
<observers>
  <observer name="OB1" classname="sample.observer.OB1" checkInterval="5000" />
  <observer name="OB2" classname="sample.observer.OB2" checkInterval="5000"/>
</observers>
</ozpushserver>
```

- Push : " " , " " 가 " , " 가 " ODI 가 가 "OnClick" 가

- Button1(StartPush)

```
//Push Server Push Server
var dm = _GetDataManager.GetDataModule("ozcar");
//Push Server IP, Port, Observer Name
var push = dm.StartPush("127.0.0.1", "8088", "OB1");
```

- Button2(EndPush)

```
// Push Server
var dm = _GetDataManager.GetDataModule("ozcar");
var push = dm.EndPush();
```

- ozsample.oz

- sample.html

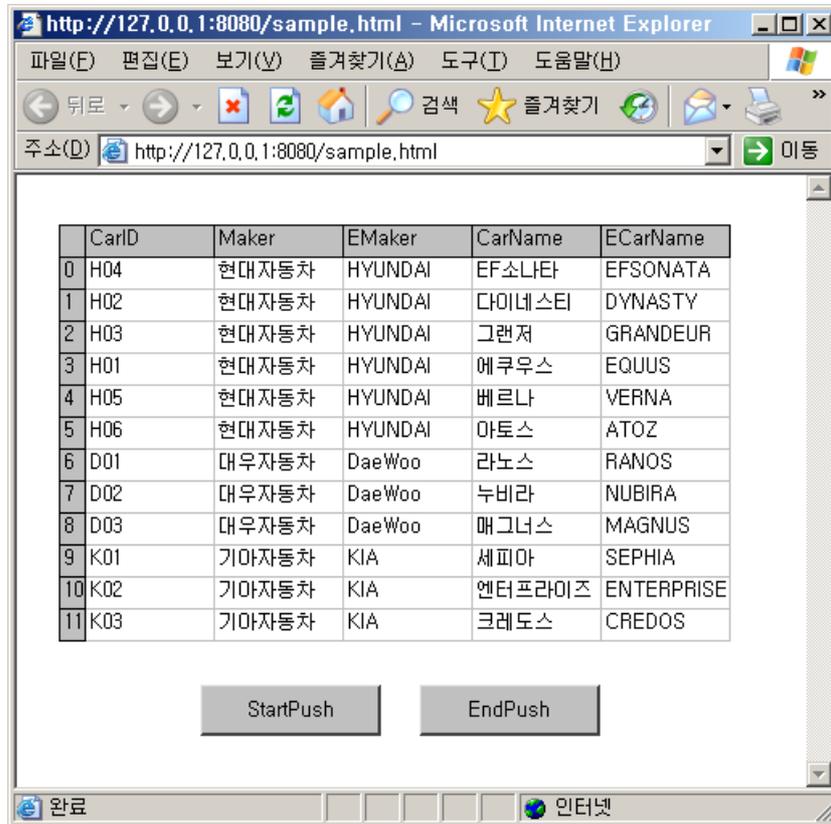
```
<html>
<body>
<div id = "RunOZViewer">
```

```

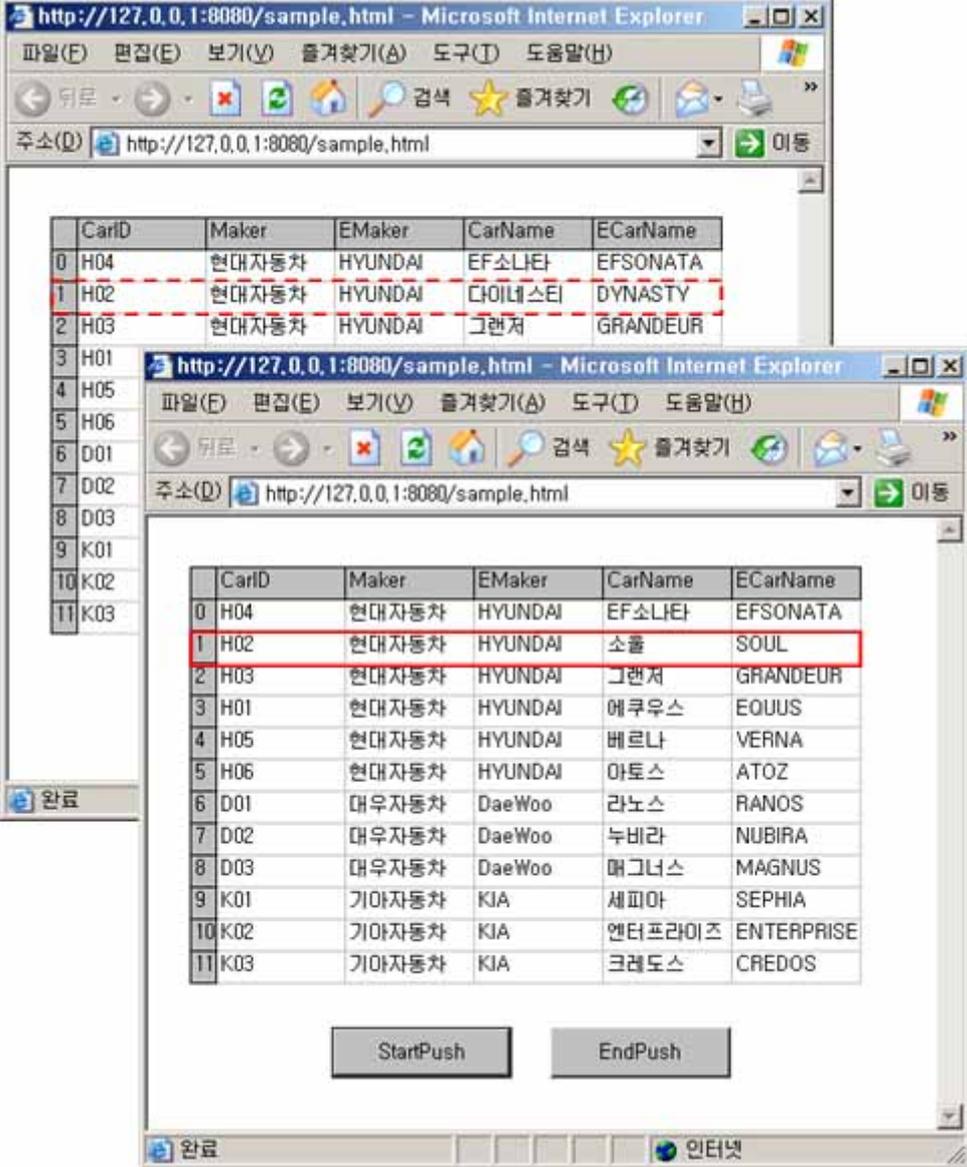
<object id = "OZApplicationViewer" CLASSID = "CLSID:907A00F3-7390-4EF2-931B-360546587804" width = "100%" height = "100%">
  <param name = "repository_agent.type" value = "FROM_OZSERVER">
  <param name = "repository_agent.ozserver.servlet" value = "http://127.0.0.1:8080/oz/server">
  <param name = "ozadoc.path" value = "ozsample.oz">
</object>
</div>
</body>
</html>

```

> sample.html  
 [StartPush] Push



> 가



The screenshot displays two overlapping Microsoft Internet Explorer windows. The top window shows a table with the following data:

CarID	Maker	EMaker	CarName	ECarName	
0	H04	현대자동차	HYUNDAI	EF소나타	EFSONATA
1	H02	현대자동차	HYUNDAI	다이내스티	DYNASTY
2	H03	현대자동차	HYUNDAI	그랜저	GRANDEUR

The bottom window shows a larger table with the following data:

CarID	Maker	EMaker	CarName	ECarName	
0	H04	현대자동차	HYUNDAI	EF소나타	EFSONATA
1	H02	현대자동차	HYUNDAI	소울	SOUL
2	H03	현대자동차	HYUNDAI	그랜저	GRANDEUR
3	H01	현대자동차	HYUNDAI	에쿠우스	EQUUS
4	H05	현대자동차	HYUNDAI	베르나	VERNA
5	H06	현대자동차	HYUNDAI	아토스	ATOZ
6	D01	대우자동차	DaeWoo	라노스	RANOS
7	D02	대우자동차	DaeWoo	누비라	NUBIRA
8	D03	대우자동차	DaeWoo	매그너스	MAGNUS
9	K01	기아자동차	KIA	세피아	SEPHIA
10	K02	기아자동차	KIA	엔터프라이즈	ENTERPRISE
11	K03	기아자동차	KIA	크레도스	CREDOS

Below the table in the bottom window are two buttons: "StartPush" and "EndPush".