

Installing OVID 1.1.0 on OpenVista

Obtain the OVID sources from <http://www.launchpad.net> or by downloading from <http://medsphere.org/download/project/ovid>. The latest version, at this writing is 1.1.0, and is recommended. To use launchpad, you must create a Launchpad (lp) account and establish a security key. The Launchpad site does a good job of documenting the process. For the purposes of this document, it will be assumed that the following [bazaar](#) command was used to get the latest sources:

```
bzr branch lp:ovid ovid-dev-1.1.0
```

Or, if using the zip file, then there should be an ovid-dev-1.1.0 directory available after unzipping. Once you change to the ovid-dev-1.1.0 directory, there should be an ovid and an ovid-domain directory. The ovid directory is the base ovid sources. The ovid-domain directory is a reference implementation of a domain model. Feel free to use and extend it for your purposes. We are interested in incorporating an extensions or new domain objects into this reference model, so please pass them along. Launchpad makes it easy to generate merge directives that we can use to incorporate these types of changes.

You'll need java 6 and [ant](#) installed in order to build the project.

To build, change to the ovid-dev (or ovid-dev-1.1.0) directory and type ant. You should see output similar to:

```
/tmp/ovid-dev-1.1.0$ ant
```

```
Buildfile: /tmp/ovid-dev-1.1.0/build.xml
```

```
build:
```

```
download-ivy:
```

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```
[echo] installing ivy...
[get] Getting: http://repo1.maven.org/maven2/org/apache/ivy/ivy/2.0.0-beta1/ivy-2.0.0-beta1.jar
[get] To: /tmp/ovid-dev-1.1.0/ovid/ivy/ivy.jar
[get] Not modified - so not downloaded

install-ivy:

resolve:
No ivy:settings found for the default reference 'ivy.instance'. A default instance will be used
[ivy:retrieve] :: Ivy 2.0.0-beta1 - 20071206070608 :: http://ant.apache.org/ivy/ ::
:: loading settings :: file = /tmp/ovid-dev-1.1.0/ovid/ivysettings.xml
[ivy:retrieve] :: resolving dependencies :: medsphere#ovid;working@scylla
[ivy:retrieve]   confs: [default]
[ivy:retrieve]   found junit#junit;4.5 in ibiblio
[ivy:retrieve] :: resolution report :: resolve 426ms :: artifacts dl 23ms
-----
|          |          modules          || artifacts |
|   conf   | number| search|dwnlded|evicted|| number|dwnlded|
-----+-----+-----+-----+-----+-----+-----+-----+
| default  |  1    |  0    |  0    |  0    ||  1    |  0    |
-----+-----+-----+-----+-----+-----+-----+
[ivy:retrieve] :: retrieving :: medsphere#ovid
[ivy:retrieve]   confs: [default]
[ivy:retrieve]   1 artifacts copied, 0 already retrieved (194kB/32ms)

init:
[mkdir] Created dir: /tmp/ovid-dev-1.1.0/ovid/lib
[mkdir] Created dir: /tmp/ovid-dev-1.1.0/ovid/bin

compile:
[javac] Compiling 115 source files to /tmp/ovid-dev-1.1.0/ovid/bin
[javac] Note: Some input files use or override a deprecated API.
[javac] Note: Recompile with -Xlint:deprecation for details.
[javac] Note: Some input files use unchecked or unsafe operations.
[javac] Note: Recompile with -Xlint:unchecked for details.

jar:
[jar] Building jar: /tmp/ovid-dev-1.1.0/ovid/lib/ovid.jar

build:

download-ivy:
[echo] installing ivy...
[get] Getting: http://repo1.maven.org/maven2/org/apache/ivy/ivy/2.0.0-beta1/ivy-2.0.0-beta1.jar
[get] To: /tmp/ovid-dev-1.1.0/ovid-domain/ivy/ivy.jar
[get] Not modified - so not downloaded

install-ivy:

resolve:
No ivy:settings found for the default reference 'ivy.instance'. A default instance will be used
[ivy:retrieve] :: Ivy 2.0.0-beta1 - 20071206070608 :: http://ant.apache.org/ivy/ ::
:: loading settings :: file = /tmp/ovid-dev-1.1.0/ovid-domain/ivysettings.xml
[ivy:retrieve] :: resolving dependencies :: medsphere#ovid-domain;working@scylla
```

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```
[ivy:retrieve]   confs: [default]
[ivy:retrieve] :: resolution report :: resolve 59ms :: artifacts dl 0ms
-----
|           |           modules           || artifacts |
|   conf    | number| search|dwnlded|evicted|| number|dwnlded|
-----+-----+-----+-----+-----+-----+-----+-----+
|   default |   0   |  0   |  0   |  0   ||   0   |  0   |
-----+-----+-----+-----+-----+-----+
[ivy:retrieve] :: retrieving :: medsphere#ovid-domain
[ivy:retrieve]   confs: [default]
[ivy:retrieve]   0 artifacts copied, 0 already retrieved (0kB/3ms)

init:
  [mkdir] Created dir: /tmp/ovid-dev-1.1.0/ovid-domain/lib
  [mkdir] Created dir: /tmp/ovid-dev-1.1.0/ovid-domain/bin

compile:
  [javac] Compiling 111 source files to /tmp/ovid-dev-1.1.0/ovid-domain/bin
  [javac] Note: Some input files use unchecked or unsafe operations.
  [javac] Note: Recompile with -Xlint:unchecked for details.

jar:
  [jar] Building jar: /tmp/ovid-dev-1.1.0/ovid-domain/lib/ovid-domain.jar

build:

BUILD SUCCESSFUL
Total time: 8 seconds
```

Note: we are using the [ivy](#) dependency manager to download dependent jars from the internet, so an internet connection is needed for the first invocation. Afterward, ivy will use the jars cached on the local machine, making it possible to build without an internet connection. Also, the first time that ivy executes, the build might take a few minutes as ivy downloads the jars. But, since ivy caches them locally, subsequent builds will be quick.

- Next, install the necessary KIDS builds
- You can find the OPENVISTA_INTERFACE_DOMAIN_1_0.KID file in the ovid-dev-1.1.0/ovid/src/mumps/kids directory.
- Install as follows:

Script started on Wed 16 Feb 2011 02:13:24 PM CST

/tmp/ovid-dev-1.1.0\$ **openvista open**

OPEN>**D ^XUP**

Setting up programmer environment

Identity = man,sys MANAGER,SYSTEM SM OTHER

Terminal Type set to: C-VT320

You have 154 new messages.

Select MENU OPTION: EVE// Systems Manager Menu

- Core Applications ...
- Device Management ...
- Menu Management ...
- Programmer Options ...
- Operations Management ...
- Spool Management ...
- Information Security Officer Menu ...
- Taskman Management ...
- User Management ...

FM VA FileMan ...

- Application Utilities ...
- Capacity Planning ...
- HL7 Main Menu ...

Test an option not in your menu

Select Systems Manager Menu Option: **programmer** Options

KIDS Kernel Installation & Distribution System ...

PG Programmer mode

- Delete Unreferenced Options
- Error Processing ...
- Global Block Count
- Routine Tools ...

Select Programmer Options Option: KIDS Kernel Installation & Distribution System

Edits and Distribution ...

Utilities ...

Installation ...

Patch Monitor Main Menu ...

Select Kernel Installation & Distribution System Option: **Installation**

- 1 Load a Distribution
 - 2 Run XINDEX against a Distribution
 - 3 Print Transport Global
 - 4 Compare Transport Global to Current System
 - 5 Backup a Transport Global
 - 6 Install Package(s)
- Restart Install of Package(s)
- Unload a Distribution
- Verify Checksums in Transport Global

Select Installation Option: **1 Load a Distribution**

Enter a Host File: **/tmp/ovid-dev-1.1.0/src/mumps/kids/**
OPENVISTA_INTERFACE_DOMAIN_1_0.KID

KIDS Distribution saved on Dec 02, 2010@10:50

Comment: OVID Release

This Distribution contains Transport Globals for the following Package(s):

OPENVISTA INTERFACE DOMAIN (OVID) 1.0

Distribution OK!

Want to Continue with Load? YES//

Loading Distribution...

OPENVISTA INTERFACE DOMAIN (OVID) 1.0

Use INSTALL NAME: OPENVISTA INTERFACE DOMAIN (OVID) 1.0 to install this Distribution.

Press <Enter> to continue

- 1 Load a Distribution

- 2 Run XINDEX against a Distribution
 - 3 Print Transport Global
 - 4 Compare Transport Global to Current System
 - 5 Backup a Transport Global
 - 6 Install Package(s)
- Restart Install of Package(s)
- Unload a Distribution
- Verify Checksums in Transport Global

Select Installation Option: **6 Install Package(s)**

Select INSTALL NAME: **OPENVISTA INTERFACE DOMAIN (OVID) 1.0**

ID) 1.0 Loaded from Distribution 2/16/11@14:14

OVID Release ;Created on Dec 02, 2010@10:50

This Distribution was loaded on Feb 16, 2011@14:14 with header of

OVID Release ;Created on Dec 02, 2010@10:50

It consisted of the following Install(s):

OPENVISTA INTERFACE DOMAIN (OVID) 1.0

Checking Install for Package OPENVISTA INTERFACE DOMAIN (OVID) 1.0

Want to DISABLE Scheduled Options, Menu Options, and Protocols? NO//

Enter the Device you want to print the Install messages.

You can queue the install by enter a 'Q' at the device prompt.

Enter a '^' to abort the install.

DEVICE: HOME// TELNET

Install Started for OPENVISTA INTERFACE DOMAIN (OVID) 1.0 :

Feb 16, 2011@14:15:12

Build Distribution Date: Dec 02, 2010

Installing Routines:

Installing Data Dictionaries:

Installing PACKAGE COMPONENTS:

Installing REMOTE PROCEDURE

Installing OPTION

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Updating Routine file...

Updating KIDS files...

OPENVISTA INTERFACE DOMAIN (OVID) 1.0 Installed.

Feb 16, 2011 @14:15:13

NO Install Message sent

Install Completed

Press <Enter> to continue

- 1 Load a Distribution
 - 2 Run XINDEX against a Distribution
 - 3 Print Transport Global
 - 4 Compare Transport Global to Current System
 - 5 Backup a Transport Global
 - 6 Install Package(s)
- Restart Install of Package(s)
- Unload a Distribution
- Verify Checksums in Transport Global

Select Installation Option:

Edits and Distribution ...

Utilities ...

Installation ...

Patch Monitor Main Menu ...

Select Kernel Installation & Distribution System Option:

KIDS Kernel Installation & Distribution System ...

PG Programmer mode

Delete Unreferenced Options

Error Processing ...

Global Block Count

Routine Tools ...

Select Programmer Options Option:

Core Applications ...
Device Management ...
Menu Management ...
Programmer Options ...
Operations Management ...
Spool Management ...
Information Security Officer Menu ...
Taskman Management ...
User Management ...
FM VA FileMan ...
Application Utilities ...
Capacity Planning ...
HL7 Main Menu ...
Test an option not in your menu

Select Systems Manager Menu Option:

Do you really want to HALT? YES//

Halting at 14:15:18

OPEN>halt

/tmp/ovid-dev-1.1.0\$

- Next, create an OVID user that has a non-expiring password and the MSC FM RESOURCE USER option.

\$ openvista open

OPEN>D P^DI

MSC FileMan 22.1030

Identity = **MAN,SYS** MANAGER,SYSTEM pb SYSTEM MANAGER

Select OPTION: **1** ENTER OR EDIT FILE ENTRIES

Input to what File: NEW PERSON// **NEW PERSON** (54 entries)

EDIT WHICH FIELD: ALL// **.01** NAME

THEN EDIT FIELD: **7.2** VERIFY CODE never expires

THEN EDIT FIELD: **2.1** Want to edit ACCESS CODE (Y/N)

THEN EDIT FIELD: **11.1** Want to edit VERIFY CODE (Y/N)

THEN EDIT FIELD: **203** SECONDARY MENU OPTIONS (multiple)

EDIT WHICH SECONDARY MENU OPTIONS SUB-FIELD: ALL// **.01** SECONDARY MENU OPTIONS

THEN EDIT SECONDARY MENU OPTIONS SUB-FIELD:

THEN EDIT FIELD:

Select NEW PERSON NAME: **USER,OVID**

Are you adding 'USER,OVID' as a new NEW PERSON (the 55TH)? No// **Y** (Yes)

Checking SOUNDEX for matches.

USER,MEDSPHERE TWELVE

USER,NURSE

USER,PHARMACIST

USER,LAB

USER,DIETITIAN

USER,RADIOLOGIST

USER,PT

USER,ANESTHESIA

USER,SURGEON

USER,PSYCHIATRIST

USER,SOCIAL

USER,PHYSICIAN

USER,MEDSPHERE TWENTY-FOUR

USER,MEDSPHERE TWENTY-FIVE

USER,MEDSPHERE TWENTY-SIX

USER,MEDSPHERE TWENTY-SEVEN

Press Return to Continue.

USER,MEDSPHERE TWENTY-EIGHT

USER,MEDSPHERE TWENTY-NINE
USER,MEDSPHERE THIRTY
USER,MEDSPHERE THIRTY-ONE
USER,MEDSPHERE THIRTY-TWO
USER,MEDSPHERE THIRTY-THREE
USER,MEDSPHERE THIRTY-FOUR
USER,MEDSPHERE THIRTY-FIVE
USER,MEDSPHERE THIRTY-SIX
USER,MEDSPHERE THIRTY-SEVEN
USER,MEDSPHERE THIRTY-EIGHT
USER,MEDSPHERE THIRTY-NINE
USER,MEDSPHERE FORTY
USER,MEDSPHERE FORTY-ONE
USER,MEDSPHERE FORTY-TWO
USER,MEDSPHERE FORTY-THREE

Press Return to Continue.

USER,MEDSPHERE FORTY-FOUR
USER,MEDSPHERE FORTY-FIVE
USER,MEDSPHERE FORTY-SIX
USER,MEDSPHERE FORTY-SEVEN
USER,MEDSPHERE FORTY-EIGHT
USER,MEDSPHERE FORTY-NINE
USER,MEDSPHERE FIFTY
USER,MEDSPHERE FIFTY-ONE
USER,MEDSPHERE FIFTY-TWO

Do you still want to add this entry: NO//**YES**

NEW PERSON INITIAL: **OVU**

NEW PERSON MAIL CODE:

VERIFY CODE never expires: **Y** Yes

Want to edit ACCESS CODE (Y/N): **Y**

Enter a new ACCESS CODE <Hidden>: **OV1234**

Please re-type the new code to show that I have it right: **OV1234**

OK, Access code has been changed!

The VERIFY CODE has been deleted as a security measure.

The user will have to enter a new one the next time they sign-on.

Want to edit VERIFY CODE (Y/N): **Y**

Enter a new VERIFY CODE: **OV1234!!**

Please re-type the new code to show that I have it right: **OV1234!!**

OK, Verify code has been changed!

Select SECONDARY MENU OPTIONS: **MSCV FM RESOURCE USER**

Are you adding 'MSC FM RESOURCE USER' as

a new SECONDARY MENU OPTIONS (the 1ST for this NEW PERSON)? No// (No) ? **Y** (Yes)

Select SECONDARY MENU OPTIONS:

Select NEW PERSON NAME:

Select OPTION:

OPEN>**halt**

- Next, make sure that RPCBroker is running on the target OpenVista and make note of the port. The mumps command to start the new style broker is:

D RESTART^XWBTCP

Next, you are ready to try and execute a simple validation script, named get-patients.sh on linux and get-patients.bat on windows. You'll need to know:

- The host and port that RPC Broker is running on.
- The OVID access/verify code you created in the previous step.
- The access/verify code of a user currently on the system who has been granted the OR CPRS GUI CHART option.

Note that this script will attempt to retrieve and print out every patient in the instance. So, if you have a large number of patients in your instance, be prepared to press CNTRL-C to stop the output.

The get-patients test script is now located in the ovid-domain directory (ovid-dev-1.1.0/ovid-domain).

You can execute: **sh get-patients.sh** (in linux) and be prompted for each value, or you can supply them on the command line.

You should get output similar to:

```
ovid-domain$ sh get-patients.sh localhost 9201 OV1234 OV1234!!! PU1234 PU1234!!!
```

```
SLF4J: Failed to load class "org.slf4j.impl.StaticLoggerBinder".
```

```
SLF4J: Defaulting to no-operation (NOP) logger implementation
```

```
SLF4J: See http://www.slf4j.org/codes.html#StaticLoggerBinder for further details.
```

```
patient: DFN=[3] name=[PATIENT,CLINICAL F] sex=[FEMALE] dob=[Wed Apr 27 00:00:00  
CST 1955] eid=[TST900000101] id=[TST900000101] age=[55.0] display age=[55] room-  
bed=[101-1] current room=[101-1] attending=[USER,PHYSICIAN] ward=[ICU] current  
movement=[SEP 9,2008@03:35:06] current admission=[3] admitting physician=[42]  
admitting diagnosis=[AUTO ACCIDENT]
```

```
patient: DFN=[4] name=[PATIENT,CLINICAL M] sex=[MALE] dob=[Sun Nov 18 00:00:00  
CST 1945] eid=[TST900000102] id=[TST900000102] age=[65.0] display age=[65] room-  
bed=[201-1] current room=[201-1] attending=[USER,PHYSICIAN] ward=[MED/SURG]  
current movement=[SEP 9,2008@03:42:15] current admission=[5] admitting physician=[42]  
admitting diagnosis=[ABDOMINAL PAIN]
```

```
patient: DFN=[2] name=[PATIENT,DIETARY] sex=[FEMALE] dob=[Sun Dec 01 00:00:00  
CST 1968] eid=[TST900000100] id=[TST900000100] age=[42.0] display age=[42] room-  
bed=[301-1] current room=[301-1] attending=[USER,PHYSICIAN] ward=[PSYCH] current  
movement=[SEP 9,2008@01:29:15] current admission=[1] admitting physician=[42]  
admitting diagnosis=[BACK PAIN]
```

```
patient: DFN=[6] name=[PATIENT,LABORATORY] sex=[MALE] dob=[Sat Nov 12 00:00:00  
CST 1960] eid=[TST900000104] id=[TST900000104] age=[50.0] display age=[50] room-
```

bed=[202-1] current room=[202-1] attending=[USER,PHYSICIAN] ward=[MED/SURG]
current movement=[SEP 9,2008@03:53:13] current admission=[9] admitting physician=[42]
admitting diagnosis=[INFECTION]

patient: DFN=[8] name=[PATIENT,PEDIATRIC] sex=[MALE] dob=[Sun Jun 01 00:00:00
CDT 2003] eid=[TST900000106] id=[TST900000106] age=[7.0] display age=[7] room-
bed=[103-1] current room=[103-1] attending=[USER,PHYSICIAN] ward=[ICU] current
movement=[SEP 9,2008@04:20:37] current admission=[13] admitting physician=[42]
admitting diagnosis=[SKIN RASH]

patient: DFN=[7] name=[PATIENT,PHARMACY] sex=[FEMALE] dob=[Wed Jan 15 00:00:00
CST 1975] eid=[TST900000105] id=[TST900000105] age=[36.0] display age=[36] room-
bed=[302-1] current room=[302-1] attending=[USER,PHYSICIAN] ward=[PSYCH] current
movement=[SEP 9,2008@04:15:09] current admission=[11] admitting physician=[42]
admitting diagnosis=[CHEST PAIN]

patient: DFN=[5] name=[PATIENT,RADIOLOGY] sex=[FEMALE] dob=[Sat Aug 01 00:00:00
CDT 1970] eid=[TST900000103] id=[TST900000103] age=[40.0] display age=[40] room-
bed=[102-1] current room=[102-1] attending=[USER,PHYSICIAN] ward=[ICU] current
movement=[SEP 9,2008@03:48:04] current admission=[7] admitting physician=[42]
admitting diagnosis=[AUTO ACCIDENT]

patient: DFN=[1] name=[ZZTEST,ONE] sex=[MALE] dob=[Sat Dec 30 00:00:00 CDT 1944]
eid=[3773773773] id=[3773773773] age=[66.0] display age=[66] room-bed=[null] current
room=[null] attending=[null] ward=[null] current movement=[null] current admission=[null]
admitting physician=[null] admitting diagnosis=[null]

ovid-domain\$

If you get output like this, then the OVID OpenVista Server install is successful. Its recommended that you peruse the OVID sources. A good place to start would be the PatientRepository class, which produced the output above.