

# Learning about Informix and the Open Admin Tool (OAT)

With Tom Beebe

***Webcast on Feb 11, 2014***

***Starts at 2pm (EST)***

***Advanced DataTools***

# What is it?

- OAT – Open Admin Tool
- Open source, PHP based
- Free
- Allows you to monitor and manage many aspects of Informix instance(s) through a web browser
- Regularly being updated.
- Informix version 11.1 and later (some features are only for 11.7 and 12)

# How do I get it?

Three ways to get it

- Informix Virtual Appliance
- Install it as part of the engine or the CSDK
- Install it stand alone on a webserver running PHP
- The CSDK version is shipped with Linux Windows and Mac versions. (Some limitations)
- The stand alone should work with any OS running a webserver, PHP, and the necessary PHP modules

# Stand Alone Webservice

- Needs to have PHP5 or later
- Required PHP Modules
  - pdo\_informix
  - pdo\_sqlite
  - Soap
- Recommended PHP Modules
  - Gd
  - Zip
- Just unpack the tar or zip file on your server and point your web browser to the directory to start the install. (The webservice will need write access to several of the directories)
- The latest stand alone Community Edition version is 3.1.1
- The latest CSDK version is 3.1.2 that includes some bug fixes and json support for IDS12xC2

# Stand Alone INFORMIXDIR

- Your stand alone Webserver/PHP installation will need to be running with INFORMIXDIR set.
- Modify your webserver to add INFORMIXDIR to the environment and \$INFORMIXDIR/bin to the PATH env.
- Note, the INFORMIXDIR binaries must match (32/64bit) the webserver.
- The OAT readme has a good description of how to set this.

# Linux CLI Install

## Choose Product Features

-----  
ENTER A COMMA\_SEPARATED LIST OF NUMBERS REPRESENTING THE FEATURES YOU WOULD LIKE TO SELECT, OR DESELECT. TO VIEW A FEATURE'S DESCRIPTION, ENTER '?<NUMBER>'. PRESS <RETURN> WHEN YOU ARE DONE:

- 1-  IBM Informix Client SDK
- 2-  IBM Informix Object Interface for C++
- 3-  IBM Informix Object Interface for C++ Demos
- 4-  IBM Informix ESQL/C
- 5-  IBM Informix ESQL/C Demos
- 6-  7.2 Application Compatibility Module
- 7-  IBM Informix LIBDMI for Client Applications
- 8-  IBM Informix ODBC Driver
- 9-  IBM Informix ODBC Driver Demos
- 10-  IBM Informix Common Database Utilities
- 11-  Global Language Support (GLS)
- 12-  West European and Americas
- 13-  East European and Cyrillic
- 14-  Chinese
- 15-  Japanese
- 16-  Korean
- 17-  Thai
- 18-  IBM Informix OpenAdmin Tool
- 19-  IBM Informix Replication Plug-in for OpenAdmin Tool
- 20-  IBM Informix Schema Manager Plug-in for OpenAdmin Tool
- 21-  IBM Informix TimeSeries Plug-in for OpenAdmin Tool
- 22-  IBM Informix Health Advisor Plug-in for OpenAdmin Tool
- 23-  IBM Informix JSON Plug-in for OpenAdmin Tool

Please choose the Features to be installed by this installer.: 1

# Linux CLI Install

=====  
Host Name

-----

Enter the host name for your machine.

Host Name: (DEFAULT: ): webmail

=====  
Specify Apache Port Number

-----

Please specify the port number for the Apache webserver.

Specify the port number for the Apache web server.

Port Number (DEFAULT: 8080):

=====  
Security Features

-----

With OAT password protection, only OAT administrators can add and edit connection groups and change OAT configurations. Other users can manage IBM Informix database servers, but they cannot modify connection groups and OAT configurations.

Enable OAT Password Protection? (DEFAULT: yes):

=====  
OAT Administrator login setup

-----

Enter the user name and password for accessing the OAT Admin pages.

User name: (DEFAULT: admin):

=====  
Password:

# Linux CLI Install

---

## Installation Summary

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Type 'back' to go to the previous step or 'quit' to cancel the installation.  
Please review the following before continuing:

### Product Name:

IBM Informix Client SDK

### Install Folder:

/opt/informixsdk

### Product Features:

Global Language Support (GLS),  
West European and Americas,  
East European and Cyrillic,  
Chinese,  
Japanese,  
Korean,  
Thai,  
IBM Informix OpenAdmin Tool,  
IBM Informix Replication Plug-in for OpenAdmin Tool,  
IBM Informix Schema Manager Plug-in for OpenAdmin Tool,  
IBM Informix TimeSeries Plug-in for OpenAdmin Tool,  
IBM Informix Health Advisor Plug-in for OpenAdmin Tool,  
IBM Informix JSON Plug-in for OpenAdmin Tool

### Disk Space Information (for Installation Target):

Required: 365,048,092 Bytes  
Available: 19,516,743,680 Bytes



# Starting OAT CLI

- `cd <CSDK_DIR>/OAT`
- `./StartApache`
- Easy, right?

# Getting it running Modern Linux

```
# ./StartApache
```

```
/opt/informixsdk/OAT/Apache_2.4.2/bin/httpd: error  
while loading shared libraries: libpcre.so.0: cannot  
open shared object file: No such file or directory
```

```
# ls -l /usr/lib64/libpcre.so.1
```

```
/usr/lib64/libpcre.so.1 -> libpcre.so.1.2.1
```

# Wait, what?

- This is due to Apache being compiled directly against old versions of libraries
- However the symbols in newer versions of those libraries are still backwards compatible
- We can symlink the new version to where apache is looking for the old version

# Steps

```
# ln -s /usr/lib64/libpcre.so.1 /usr/lib64/libpcre.so.0
```

```
# ln -s /usr/lib64/libexpat.so.1 /usr/lib64/libexpat.so.0
```

- Try it again, new error:

```
httpd: Syntax error on line 126 of  
/opt/informixsdk/OAT/Apache_2.4.2/conf/httpd.conf: Cannot load  
/opt/informixsdk/OAT/Apache_2.4.2/modules/mod_ssl.so into server:  
libssl.so.6: cannot open shared object file: No such file or directory
```

- This is due to SSL being linked to a very old version of libssl that was on 5. The **new** version of the ssl libraries are openssl 1.0.x

# Fix SSL

- In -s /lib64/libssl.so.1.0.0 /lib64/libssl.so.6
- In -s /lib64/libcrypto.so.1.0.0 /lib64/libcrypto.so.6

# LibPNG

- httpd: Syntax error on line 492 of /opt/informixsdk/OAT/Apache\_2.4.2/conf/httpd.conf: Cannot load /opt/informixsdk/OAT/PHP\_5.4.4/libphp5.so into server: libpng12.so.0: cannot open shared object file: No such file or directory
- Now what?
- It is using an old version of libpng, the current version is 16. However Suse still does support the old version.
- Install the libpng12-0 package.
- Now run ./StartApache, it should come back cleanly.

# RHEL 6 - Steps

- In -s /lib64/libexpat.so.1.5.2 /lib64/libexpat.so.0
- In -s /usr/lib64/libssl.so.1.0.1e /usr/lib64/libssl.so.6
- In -s /usr/lib64/libcrypto.so.1.0.1e /usr/lib64/libcrypto.so.6

# Installing IDS 12uCX

- If installing the 32bit version of the engine with OAT you may have problems if you have not installed the libraries first
- Some versions will bring up apache as part of the install process and will fail due to missing libraries
- Just check for the required libraries first, or install OAT with the CSDK separately



# Error Log

In IBM\_Informix\_Software\_Bundle\_Install\_01\_10\_2014\_13\_33\_36.log:

Install Merge Module: \$BUILD\_SOURCE\$/module/OpenAdmin.iam.zip  
Status: ERROR

In OpenAdmin\_Install\_01\_10\_2014\_13\_34\_12.log:

Custom Action: com.ibm.oat.install.CheckInstallStatus  
Status: ERROR

Additional Notes: ERROR - class com.ibm.oat.install.CheckInstallStatus  
NonfatalInstallException The Apache web server failed to install or to start.

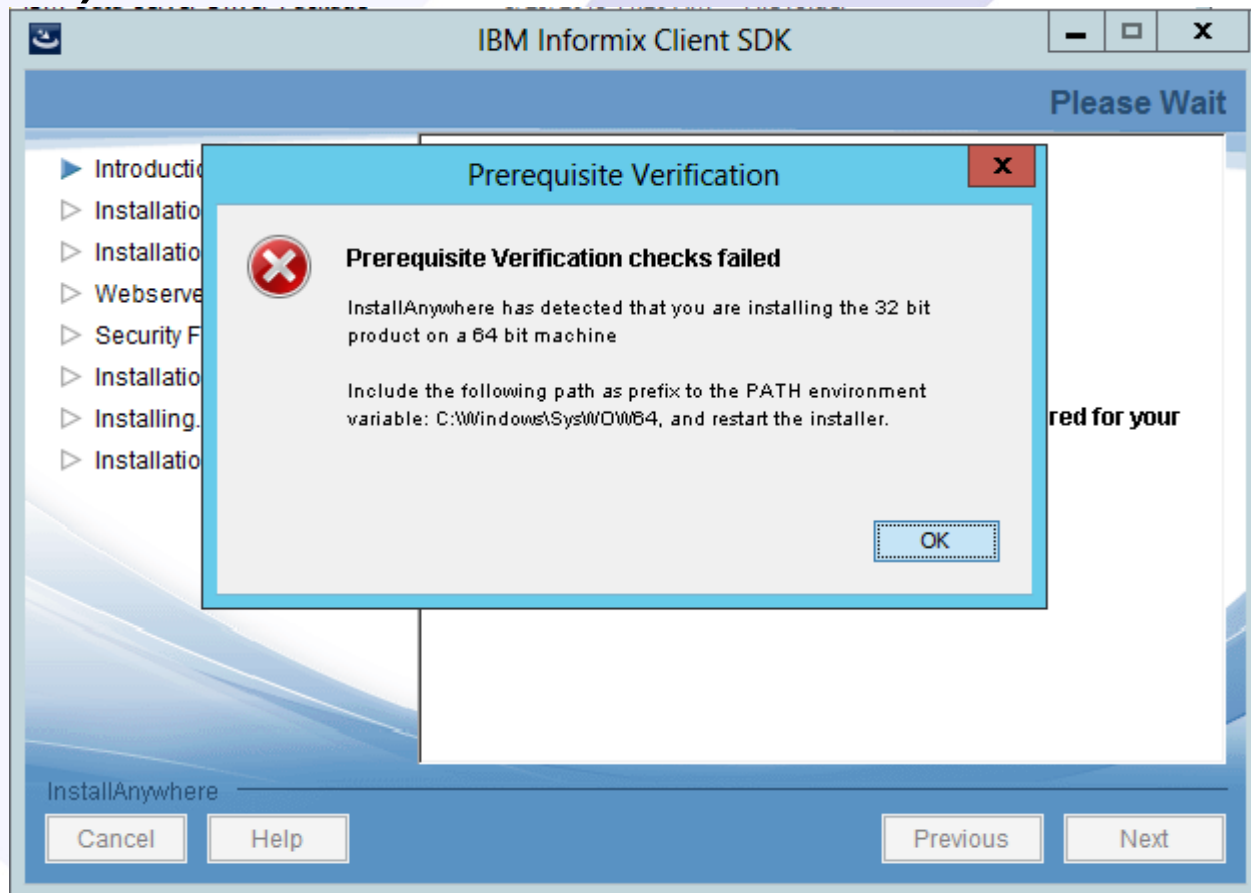
/opt/informix\_1210uc2/OAT/Apache\_2.4.2/bin/httpd: **error while loading shared libraries:  
libexpat.so.0: cannot open shared object file: No such file or directory**

# Windows 64bit

- Install the ClientSDK, but wait, where is the option for OAT?
- As of 4.10xC2 IBM still only releases OAT in the 32bit CSDK package.
- This has been stated as a goal to get it included in the 64bit version but it has not happened yet.

# Windows 64bit With 32bit CSDK

- Pull down the latest version of the SDK (TCx)



# Windows Installing 32bit SDK

- On Windows 7/Vista: go to start > applications > accessories > right click on command window and 'run as administrator'
- On Windows 8/2012: In the 'Apps' menu go to the 'Windows System' section, right click on 'Command Prompt' and choose 'Run as administrator'
- In the shell:
  - Set PATH=c:\windows\syswow64;%PATH%
  - cd <path\_to\_extracted\_csdk\_installer>
  - installclientsdk.exe
  - Wait a few seconds, then install normally, make sure to use a different path than the 64bit csdk. (If installed)

# Windows 32/64

- In the installation features make sure 'IBM Informix OpenAdmin Tool' is selected
- You may wish to deselect the 'IBM Informix Client SDK' section if you already have a 64bit version installed.
  - Note when testing this on 2012, it failed due to php requiring libraries from the CSDK portion.
- Options
  - Port Number – Where the apache server will listen for OAT
  - Apache Service Name – For use in the windows service list
  - Host Name – Hostname of the system, make sure it resolves for those that will be using the server
  - OAT Password Protection – Use this, otherwise anyone who can reach the webserver can modify the administration settings.
- Note you will need a reboot if CSDK is being installed for the first time.

# First Time Connection

Admin

Search

- Admin Home
- OAT Config
- Manage Connections
  - Connection Admin
  - Add Group
  - Add Connection
- Plug-in Manager
- Menu Manager
- Dashboard Manager
- OAT Login
- Help

### Add a Connection

OAT group	Test Group
Informix server	demoinst_tcp
Host name	192.168.1.3
Port	9088
User name	informix
Password	●●●●●●●●
Informix protocol	onsoctcp
idsd port	10000
Environment variables	View/Modify

Save Cancel Test Connection

# Getting Started

- At the main screen you can either go to the Admin menu or enter the login details for a server manually.
- If you don't want to manually enter all of the connection information each time, set up a connection first.
- May be policies or security reasons why you would not be allowed to set up stored connections.




# Groups and Connections

- Under manage connections in the admin menu you will see groups and connections
- Use a group if you want segmented sets of Informix instances to allow users to select from a series of instances
- Groups can be set to be read only to allow for monitoring without modification



# Adding a Connection

Login Admin

Search 

- Admin Home
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Save Cancel Test Connection

# Adding a Connection

- OAT Group – The group for this connection to go in
- Informix Server – SQLHosts entry name
- Host Name – server name or IP
- Port – Informix TCP port
- Username/Password – That you wish to connect to Informix.
- Informix Protocol – Standard
- IDSD Port – Special Daemon that can be set up to allow OAT to start an offline instance. (optional)
- Environment variables – Used if you need custom ones for this instance

# Connecting

- Go to the 'Login' tab at the top.
- Choose the OAT group, enter the password and hit 'Get Servers'
- Select a server and hit 'Log In'

# Security Concerns

- Go into `<CSDK>/OAT/Apache_2.4.2/htdocs` and remove `phpinfo.php` or edit so it looks like:  
`//phpinfo();`
- If you want to password protect the entire OAT system, add a password limiting `.htaccess` file to the `htdocs/openadmin` directory.
- Never leave an OAT group without a password if there are connections defined.

# Links

OAT Homepage - <http://www.openadmintool.org/>

Mobile OAT - <http://www.ibm.com/developerworks/data/library/techarticle/dm-1304informix/index.html>

Informix\_PDO - [http://pecl.php.net/package/PDO\\_INFORMIX](http://pecl.php.net/package/PDO_INFORMIX)

Informix Virtual Appliance How-To -

[http://pic.dhe.ibm.com/infocenter/informix/v121/index.jsp?topic=%2Fcom.ibm.virtapp.doc%2Fids\\_va.htm](http://pic.dhe.ibm.com/infocenter/informix/v121/index.jsp?topic=%2Fcom.ibm.virtapp.doc%2Fids_va.htm)

Download the Virtual Appliance -

[https://www14.software.ibm.com/webapp/iwm/web/reg/download.do?source=swg-informixfpd&S\\_PKG=dl](https://www14.software.ibm.com/webapp/iwm/web/reg/download.do?source=swg-informixfpd&S_PKG=dl)

ER with OAT - <http://www.ibm.com/developerworks/data/library/techarticle/dm-1003idsopenadmin/index.html>

Apache Password Protection - <http://httpd.apache.org/docs/2.2/howto/auth.html#gettingitworking>



# Questions?

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# Upcoming Webcasts

- Getting started with PHP Series
  - Mar 18 – Getting up and running
    - Installing PHP including PDO\_Informix
    - Starting basic command line applications
  - Apr 22 – Getting going with PHP
    - Creating simple applications
    - Introduction to PHP classes, functions and database access.
  - May 20 – What is a web form?
    - Introduction to what writing web based code really is
    - Using PHP to create simple and complex web based forms
  - Jun 17 – Pulling it together.
    - Creating a full fledged application using PHP and Informix.

# IIUG 2014 Conference

- April 27- May 1st 2014
- Miami, Florida!

<http://www.iiug2014.org>





# Thank You

## Tom Beebe

***Advanced DataTools Corporation***

tom@advanceddatatools.com

For more information:

<http://www.advanceddatatools.com>