

InterWorx WhitePaper

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InterWorx POC Review

We took InterWorx Cluster Control Panel, <http://www.interworx.com/>, for a spin. The initial reason was to look at a stepping stone from cPanel to VMWare in regards to cost and complexity. We were looking for a setup that would allow for an end user control panel but still have the ability to rapidly scale up.

The Intro

InterWorx Cluster Panel touts itself as a server cluster solution that helps hosts achieve superior availability and scalability over their competitors without killing profit margins. It has all the features of the Control Panel with the additional benefit of being able to spawn and expand a server cluster as needed.^[5] What the cluster allows is for a master server to run LinuxVirtualMachine software loadbalancer to handle request for HTTP, HTTPS, SMTP, POP3, IMAP, and FTP. The master server also functions as the DNS and the Control Panel (NodeWorx/SiteWorx^[6]). Users home data is stored at a single filesystem location. This can be a remote NFS share on a SAN or simply local disk space on the master that it will create a NFS export for the application servers to mount.

The Setup

For our setup we deployed 1 Master server (load balancer, control panel, DNS, MySQL), 2 Application servers with round robin from the load balancer (HTTP, SMTP), and one NFS server (this does not require an InterWorx license and we used Quantastore to provide the export).

The Good

GUI

Upon logging in the layout is very user friendly. The home page for NodeWorx provides you with a high level overview of everything happening in the server. The Server Status shows what services are online and the ability to start/stop/restart each. Graphs on the right provide CPU, RAM, and bandwidth. Server information including hostname, CPU, OS, and Disk usage.



Adding a new user was very simple. You can set all the features individually or set a previously saved package that will input your disk space, bandwidth, email accounts that can be created, etc. SiteWorx is just as easy for the user to configure the site.

Support

Receiving support from InterWorx was simple. If you have an issue they provide a Remote Assistance page in the GUI. Under this you can enable the remote assistance (downloads keys, creates SSH support user, allows the support login box, and disables everything after 24 hours) and provides all the information you need for opening a support case (Version, Key, IP, SSH port, OS, Clusterd). Also the support case I worked with was a single response solution. They were able to diagnosis and fix the issue and provided me with the cause of the issue.

The Bad

I am listing out what I feel are the most major to least major drawbacks.

Single Point of Failure

Both the master server, file server, and mysql server provide a single point of failure. For the master server InterWorx is working on a master cluster that in the demo shows a 45second outage for the passive master/load balancer to take over. Until this is released an alternative would be to host this in a VMWare HA cloud. For the file server to be redundant we could use a clustered file system, ie GlusterFS. The MySQL service can be clustered with a mysql cluster like Galera [7](#). These workarounds are not included by default with InterWorx and will result in alot more back-end configuration.

Heart Beat Monitoring

The heartbeat monitoring did not work by default. After working a case with support it was discovered that

Idirectord isn't set up by default on 5.0.6 yet, so what you can do to get this running is:

On the node, run the following commands.

```
yum install heartbeat-lldirectord resource-agents
~iworx/bin/lldirectord.pex --enable --sync
service lldirectord start
```

That'll make sure that InterWorx is controlling lldirectord on the node. I just did that on the cluster manager. After that, heartbeat sync should work and your test will function correctly.

Central Logs

The application servers do not have a single log view. We ran into an issue with HTTP and had to login and watch both servers error logs to determine the issue. To avoid this issue the servers can be configured to log to a central syslog server either just forwarding syslog events or using a 3rd party software like Splunk to be a central repo for the logs.

Other small annoyances

Some other things we ran into with our test were if one of the application servers are down new accounts can not be created. The documentation is hard to follow in some places (ex Step 5. Setup cluster node - but with no link/info in guide to set it up). Also with the documentation some information only applies to a cluster setup but there is no way to differentiate between if instructions just for cluster or single server setup.

The Overall

The control panel is a good drop in replacement for cPanel or any other hosting control panel.⁸ All the standard services and end-user features are present. With just a single master server no issues arose creating accounts, adding emails addresses, viewing statistics, and configuration services. The problem comes in when trying to add the application servers. Unfortunately the list of The Bad was longer than The Good for the purpose of our deployment. While InterWorx would seem a very nice drop in replacement for cPanel the Clustering functionality is not there yet. If the single point of failure would be setup with a master/passive load balancer and allow for multiple file servers then would recommend this product as a stepping stone.

Additional note, as it stands now if you want a more distributed network(different http, https, IMAP, POP3, SMTP servers) then this would work out OK if you realize the single points of failures since you can control all from the single admin area.

Some technical installation/notes for KBing

Overall technical experience with this is that we had a few hiccups with the installation that we were able to work through. The cluster product feels young still and has some bugs/issues to work through before I would recommend it to be a end user/customer product. When they release the secondary cluster node(HA) this product should be re-evaluated for a stepping stone between the 2.



NFS Special requirements

When using a NFS partition, in addition to the installation requirements it lists, you need to make sure that the export options has no_root_squash enabled. Also the folder needs owned by root.root and 755 permissions(not default for Quantastor mounts)

Install script has issues with symlink creation.

Install script tries to create a "chroot" home partitions for quotas. This then created /home/interworx/interworx instead of just /home/interworx

```
Second time round, didnt properly put symlink in place:
lrwxrwxrwx 1 root root 32 Jul 23 10:26 iworx -> /home/interworx/etc/init.d/iworx
[root@unknown ~]# /home/interworx/
interworx/ lib/
[root@unknown ~]# cd /home/interworx/
[root@unknown interworx]# ls -lah
total 0
drwx--x--x 3 root root 32 Jul 23 10:30 .
drwx--x--x 3 root root 37 Jul 23 10:30 ..
lrwxrwxrwx 1 root root 20 Jul 23 10:30 interworx -> /usr/local/interworx
drwx--x--x 3 root iworx 18 Jul 23 10:30 lib
[root@unknown interworx]# ls lib/mysql/.nfs000000000104147500000002 ^C
[root@unknown interworx]# cd ../
[root@unknown home]# ls
interworx vpopmail
[root@unknown home]# rm -Rf interworx
[root@unknown home]# ln -s /usr/local/interworx interworx
```

Error when restarting InterWorx after initial install

When you first complete the interworx install you need to login and complete the initialization. Before this if you try and restart interworx you will receive the following error

```
Error when restarting iworx (this will happen until you complete the initialization
step..)
Uncaught IWorx_Exception_DbUtil: DB Error: insufficient permissions
[nativecode=Access denied for user: '@localhost' to database 'iworx'] **
mysql://iworx:@unix(/home/interworx/var/run/mysql.sock)/iworx
A system error has occurred. Please try your request again in a few minutes.
If the error persists, please contact support.
```

[5](http://www.interworx.com/products/cluster-panel/) <http://www.interworx.com/products/cluster-panel/>

[6](#) NodeWorx is the admin side of the control panel where setting up clustering, creating accounts, etc (think WHM). SiteWorx is the end user-side where they will login to create email accounts, subdomains (think cPanel)

[7](http://www.howtoforge.com/installing-the-galera-iworx-cluster) <http://www.howtoforge.com/installing-the-galera-iworx-cluster>

[8](http://www.interworx.com/cpanel-vs-plesk-vs-directadmin-vs-interworx-comparison/) <http://www.interworx.com/cpanel-vs-plesk-vs-directadmin-vs-interworx-comparison/>