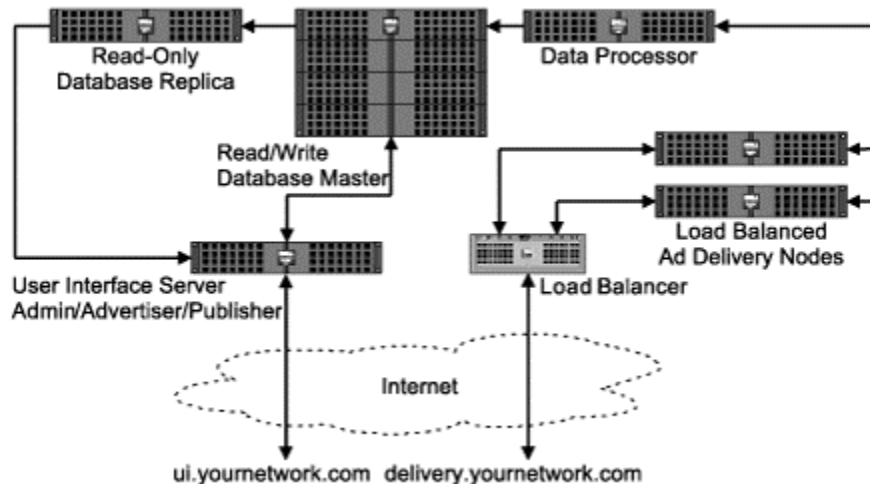


Deployment Requirements and Configuration, 40M+ / Day

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Deployment Requirements and Configuration (Assuming 40M+ Impressions/Day)



Hardware (5-6 Machines):

1. Primary Master MySQL Database Server
2. Read-only replica of the Primary for report generation and ad delivery
3. Primary UI node for the management UI, reports and cron execution.
4. Secondary ad delivery node (load-balanced)
5. Secondary ad delivery node (load-balanced)
6. (If needed) A third database server to process incoming impressions (inclick_ads_impressions_temp)

Configuration

In order to support a variety of deployment scenarios the ad server configuration is very flexible. For the above hardware configuration the following would be required.

1. The first step would be to install the ad server on the Primary UI node pointed to the Primary Master DB during the installation. This should be something like 'ui.mydomain.com'
2. Configure your settings such as ad character limits, payment settings, and make sure and point the ad delivery URL to something like 'delivery.mydomain.com'
3. Setup the background processes like this:

```
* /2 * * * * php -f [INCLICK_WEB_HOME]/include/core/background/process_manager.php
* /2 * * * * php -f [INCLICK_WEB_HOME]/include/core/background/process_impressions.php
* /2 * * * * php -f [INCLICK_WEB_HOME]/include/core/background/process_clicks.php
* /5 * * * * php -f [INCLICK_WEB_HOME]/include/core/background/process_contextual_urls.php
```

4. Execute this update to make the last 3 of the above crons set to 'manual'.
`UPDATE inclick_cron_status SET manual_flag = 1 WHERE code IN ('process_impressions', 'process_clicks', 'process_contextual_urls');`
5. Configure the Read-only replica as a slave of the Primary for the inclick database.
6. Now we need to modify the database configuration to support the expanded deployment. To do that, modify the file [INCLICK_WEB_HOME]/globals/globals_database.php

Add the following lines, substituting the @@SUBSTITUTE@@ as indicated

inClick3

```
$database_config["reporting-read"] = array("host"=>"@@READ-ONLY SLAVE@@",  
"user"=>"@@READ-ONLY USER ON SLAVE@@", "password"=>"@@READ-ONLY USER  
PASSWORD@@", "database"=>"@@INCLICK DATABASE NAME ON SLAVE@@");
```

```
$database_config["ad_delivery-read"] = array("host"=>"@@READ-ONLY SLAVE@@",  
"user"=>"@@READ-ONLY USER ON SLAVE@@", "password"=>"@@READ-ONLY USER  
PASSWORD@@", "database"=>"@@INCLICK DATABASE NAME ON SLAVE@@");
```

This will tell the server to point to the read-only replica for ad delivery and reporting

6. For testing, make your delivery URL, something like `delivery.mydomain.com`, point to the UI node for now. Test to ensure all functionality works as intended and fix as necessary prior to expanding to additional ad delivery nodes.

7. Copy the `[INCLICK_WEB_HOME]` tree to the 2 secondary ad delivery nodes. Update the DNS/load balancer so your delivery URL points to these 2 machines.

Additional Scaling:

At this point, you should have a pretty solid deployment. If this still does not meet your load requirements, you can expand in the following ways:

a. If you find the load on the master database is too high due to impression processing, add a third database server that only does impression processing (machine 6 in the initial hardware list). To do this, copy the `inclick_ads_impressions_temp` table of the inclick database to the new database server. Then, add this to the `globals_database.php` configuration file:

```
$database_config["impression_logging"] = array("host"=>"@@IMPRESSION MASTER@@",  
"user"=>"@@IMPRESSION MASTER USER@@", "password"=>"@@IMPRESSION MASTER USER  
PASSWORD@@", "database"=>"@@INCLICK DATABASE NAME ON IMPRESSION MASTER@@");
```

This will cause all impression logging to happen on this machine which should significantly lighten the load on the master and is an approach employed by one of our large deployments.

b. If you find the load on the read-only replica is too high due to ad deliveries you can add an additional read-only replica with round-robin DNS.

c. If you find the load on the ad delivery nodes is too high, you can add additional nodes as needed.

d. If you find the load on the primary UI node is too high, you can add an additional UI node and load-balance `ui.mydomain.com`. The only restriction is you must use a load-balancer with sticky sessions as currently sessions are on per-machine.

Notes

a. If you make frequent changes to the configuration files in `INCLICK_WEB_HOME/globals/` or want to use the UI interface for configuration changes, the propagation of these config changes to the ad delivery nodes is currently not automatic. As a result, we recommend setting up a cron to rsync this directory every 5 minutes. There is no overhead if no changes have taken place and that way it will take at most 5 minutes for changes to propagate to the other nodes.

b. Also, as indicated in Additional Scaling -> d, if you need to load-balance the standard admin/advertiser/publisher interface then you will need to use a load-balancer that supports sticky sessions as session data is stored per-machine.