



Constructing an Organisational Timing-bell with NTP + Ubuntu or Debian for a balanced clock!

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Dr. Simon Antony Roberts
Chronolabs Cooperative

simonxaies@gmail.com

This document is provided without warranty or immediate support and is creative commons - share-a-like; throughout this document we will use the domain *.enforcer.mil for the example break down of subdomains, dynamically set A, AAAA Records as well as fallout with 3rd party resources; substitute your own organisation root domain TLD, gTLD for this domain in the working substraighthed facility and organisational breakdowns. NTP operates on Port 123 only and is left open on all machines and nodes in the timing bell.

This document will and is a guide on how to make a timing-bell to prevent convulsive and indirect measures of time from being affulent in the functions of the organisation; you may not think setting a collect and set clock is affulent but this for example with police will cause them to target the criminals they want not the defined scape of criminals as well as other organisations like intelligence will cause the scope of any investigation correctly footed and placed with any operation.

NTP Protocol which now has echo hacking prevention called 'iburst' - even though it seem a minor protocol is extremely when set correct affulent and keeps an organisation working like a well oiled piece of living organism as working motion like a finite focal basis and in action as a precision machinery of motion and counterbalancing the work place management and time management in facility even total organisation basis of motion of work-placements.

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Server Requirements for NTP Pooling

For the primary pool which is housed within the organisations main head quarters as an actual physicality and physicaly boxes within the facility, this is the same for all sub-nodes as well by area commands and subsequently based sub offices of the area command; the machines you need for this with current 64 Bit computing don't have to have much guts they just need a small solid state hard drive for if you are collecting NTP statistics to get the stats of them occassionally as well as a small amount of ram no more than 4Gb will be needed you will be able too get away seemingly NTP is very light, it doesn't use little or any MIPS or memory or even network data.

You will require 4 machines for the pools as well as a 5th machine for the base time service that would sit on ntp.enforcer.mil with the pools the other four machine delegating route to something like 0.pool.ntp.enforcer.mil + 1.pool.ntp.enforcer.mil + 2.pool.ntp.enforcer.mil + 3.pool.ntp.enforcer.mil; this makes your primary physicality for the NTP Services for your organisation.

Ntp.enforcer.mil

This is the public listed service for the pool, you would get your staff for example in windows/macintosh with the time server options on the control panel to point to this as well as their routers at home if they like for the internet if they have this option.

In the ntp.conf in /etc you only have four lines listed for services as pools with no server it would look like this in example:

```
pool 0.pool.ntp.enforcer.mil iburst
pool 1.pool.ntp.enforcer.mil iburst
pool 2.pool.ntp.enforcer.mil iburst
pool 3.pool.ntp.enforcer.mil iburst
```

This would be install in Ubuntu the NTP services with the following command:-

```
$ sudo apt-get install ntp ufw -y
$ sudo ufw allow 123
$ sudo service ntp start
```

Once you have this primary point of call for the timing-belling in NTP in quantum mechanics, this is the primary delegated route; the pools are different, they will involve a database of netbios network hostnames which some if you have any computers sitting on a drive shaft like an axel in a car and trucks will involve delegating dynamic hostnames with the API Zones-API-PHP (See: <https://sourceforge.net/p/chronolabs-cooperative/Zones-API-PHP/ci/master/tree/>) as well as the MyIP-API-PHP which will provide both Ipv4+IPv6 If available for you to call the Zones-API-PHP and set A, AAAA Records for bikes + cars + trucks and so on that have and will likely be a dynamic IP, these cars are docked in only scaler pool assigned to handle that weight grade in motion; you can if you have different grades have more than 4 pools, but generally it all fits in a fugazi like all things oversed in science come normally in a group of four always normally recreates itself in flawless precision but if you have five or six weight and environment grades for the pools, there is no harm if your organisation is this basis of pooling in the timing-bells.

0.pool.ntp.enforcer.mil

The primary alpha pool, is set to pool all servers and hardward in IT basis, for example say you have 4 servers and this is all externally hosted services and server in the organisation all have to have port 123 open and delegated NTP Services which normally you would make ntp.conf in /etc in these point to each other with a pool hostname iburst; with the last line of the ntp.conf in the NTP services on each server to list: server ntp.enforcer.mil - anyway say you have four only servers which are alpha.server.enforcer.mil + beta.server.enforcer.mil + delta.server.enforcer.mil + gamma.server.enforcer.mil; these would be listed in the 0.pool.ntp.enforcer.mil ntp.conf in /etc as follows:-

```
pool alpha.server.enforcer.mil iburst
pool beta.server.enforcer.mil iburst
pool delta.server.enforcer.mil iburst
pool gamma.server.enforcer.mil iburst
server ntp.enforcer.mil
```

This would be install in Ubuntu the NTP services with the following command:-

```
$ sudo apt-get install ntp ufw -y
$ sudo ufw allow 123
$ sudo service ntp start
```

1.pool.ntp.enforcer.mil

The secondary beta pool is for example with police only the NTP service housed in the Area Command building; say there is ntp.marrickville.lac.enforcer.mil + ntp.refern.lac.enforcer.mil + ntp.paramatta.lac.enforcer.mil + ntp.wollongong.lac.enforcer.mil for the local area commands that have sub-placement of facilities in the organisation then these with the NTP service on the small time-keeping server in the LAC physical building all are listed in 1.pool.ntp.enforcer.mil the ntp.conf in /etc would be as follows:-

```
pool ntp.marrickville.lac.enforcer.mil iburst
pool ntp.redfern.lac.enforcer.mil iburst
pool ntp.paramatta.lac.enforcer.mil iburst
pool ntp.wollongong.lac.enforcer.mil iburst
server ntp.enforcer.mil
```

This would be install in Ubuntu the NTP services with the following command:-

```
$ sudo apt-get install ntp ufw -y
$ sudo ufw allow 123
$ sudo service ntp start
```

2.pool.ntp.enforcer.mil

The third delta pool is for example with police only the NTP service housed in buildings which aren't in primary command ie. a standard station outside Local Area Command + Central Command building; say there is ntp.newtown.station.enforcer.mil + ntp.camsie.station.enforcer.mil + ntp.petersham.station.enforcer.mil + ntp.lakemba.station.enforcer.mil for the standard stations and all that is contained by basis of a local area command that have sub-placement of facilities in the organisation then these with the NTP service on the small time-keeping server in the stations physical building all are listed in 2.pool.ntp.enforcer.mil the ntp.conf in /etc would be as follows:-

```
pool ntp.newtown.station.enforcer.mil iburst
pool ntp.campsie.station.enforcer.mil iburst
pool ntp.petersham.station.enforcer.mil iburst
pool ntp.lakemba.station.enforcer.mil iburst
server ntp.enforcer.mil
```

This would be install in Ubuntu the NTP services with the following command:-

```
$ sudo apt-get install ntp ufw -y
$ sudo ufw allow 123
$ sudo service ntp start
```

3.pool.ntp.enforcer.mil

The fourth gamma pool is for example with police only the NTP service housed with all computers mounted on an axel like a bike + car + truck; these mainly will have dynamic Ips which you will need to set from the vechile with the Zones-API-PHP the A, AAAA Records either change the existing value on the DNS or add a record when one doesn't exist with the Username/Password authentication.

This pool lists in it ntp.conf all vechiles with a mounted computer in them dynamic dns as a pool; ie say the node hostname is the registration plates so there is gg465.bikes.enforcer.mil + ik475.bikes.enforcer.mil + kjh635.cars.enforcer.mil + iil738.cars.enforcer.mil + kls654.trucks.enforcer.mil + sse482.trucks.enforcer.mil in the total organisation that has a computer mounted in their axel to drive-shaft the motion of these like a scanner or potentomiter which make up the total organisation vechiles with a processor and computing applications in ntp.conf in /etc would be as follows:-

```
pool gg465.bikes.enforcer.mil iburst
pool ik475.bikes.enforcer.mil iburst
pool kjh635.cars.enforcer.mil iburst
pool iil738.cars.enforcer.mil iburst
pool kls654.trucks.enforcer.mil iburst
pool sse482.trucks.enforcer.mil iburst
server ntp.enforcer.mil
```

This would be install in Ubuntu the NTP services with the following command:-

```
$ sudo apt-get install ntp ufw -y
$ sudo ufw allow 123
$ sudo service ntp start
```

***.server.enforcer.mil**

In the servers used in the organisation as disguised in 0.pool.ntp.enforcer.mil dialogues you place by basis of definition in each server even if they are remote location in another country anything that is a computer that has remote access for data storage, information processing or accessing or is accessed with a thin client or a fat client for intranet applications or even internet application would have NTP Services defined on it; the way ntp.conf in /etc would be as follows:-

```
pool alpha.server.enforcer.mil iburst
pool beta.server.enforcer.mil iburst
pool delta.server.enforcer.mil iburst
pool gamma.server.enforcer.mil iburst
```

```
server 0.pool.ntp.enforcer.mil
server ntp.enforcer.mil
```

This would be install in Ubuntu the NTP services with the following command:-

```
$ sudo apt-get install ntp ufw -y
$ sudo ufw allow 123
$ sudo service ntp start
```

ntp.*.lac.enforcer.mil

In the command center or local area command in example like policing services; the items in the physical time-keeper server in the actual organisational facility building this LAC/CC basis of ntp.conf in /etc consist of all vechiles allocated to that building car-park; all substation of the area command but not the vechiles of the substation these only go in the sub-brance ntp.conf.

So say of vechiles allocated to what we will use as an example ntp.marrickville.lac.enforcer.mil physicality that is the building car park as the following hostnames: iu465.bikes.enforcer.mil + ll475.bikes.enforcer.mil + kss635.cars.enforcer.mil + ace738.cars.enforcer.mil + tic654.trucks.enforcer.mil + toc482.trucks.enforcer.mil; you know with vechiles that migrate between location you need to also migrate these around the ntp.conf if you want to, otherwise if there isn't many of these, you can leave them just listed in 3.pool.ntp.enforcer.mil.

So with this local area command it has 4 sub station/brances which have the hostname for NTP of: ntp.newtown.station.enforcer.mil + ntp.camsie.station.enforcer.mil + ntp.petersham.station.enforcer.mil + ntp.lakemba.station.enforcer.mil so the ntp.conf in /etc in the LAC physical machine would list the following sources for NTP:~

```
pool ntp.newtown.station.enforcer.mil iburst
pool ntp.campsie.station.enforcer.mil iburst
pool ntp.petersham.station.enforcer.mil iburst
pool ntp.lakemba.station.enforcer.mil iburst
pool iu465.bikes.enforcer.mil iburst
pool ll475.bikes.enforcer.mil iburst
pool kss635.cars.enforcer.mil iburst
pool ace738.cars.enforcer.mil iburst
pool tic654.trucks.enforcer.mil iburst
pool toc482.trucks.enforcer.mil iburst
server 1.pool.ntp.enforcer.mil
server ntp.enforcer.mil
```

This would be install in Ubuntu the NTP services with the following command:-

```
$ sudo apt-get install ntp ufw -y
$ sudo ufw allow 123
$ sudo service ntp start
```

ntp.*.station.enforcer.mil

In the none command center and none local area command that is a standard branch or office; the items in the physical time-keeper server in the actual organisational facility building this station basis of ntp.conf in /etc consist of all vechiles allocated to that building car-park.

So say of vechiles allocated to what we will use as an example ntp.newtown.station.enforcer.mil physicality that is the building car park as the following hostnames: iu223.bikes.enforcer.mil + ll566.bikes.enforcer.mil + kss666.cars.enforcer.mil + ace777.cars.enforcer.mil + tic888.trucks.enforcer.mil + toc999.trucks.enforcer.mil; you know with vechiles that migrate without having a set birth or location what you need to do between location you need to also migrate these around the ntp.conf if you want to, otherwise if there isn't many of these, you can leave them just listed in 3.pool.ntp.enforcer.mil.

```
pool iu223.bikes.enforcer.mil iburst
pool ll566.bikes.enforcer.mil iburst
pool kss666.cars.enforcer.mil iburst
pool ace777.cars.enforcer.mil iburst
pool tic888.trucks.enforcer.mil iburst
pool toc999.trucks.enforcer.mil iburst
server 2.pool.ntp.enforcer.mil
server ntp.enforcer.mil
```

This would be install in Ubuntu the NTP services with the following command:-

```
$ sudo apt-get install ntp ufw -y
$ sudo ufw allow 123
$ sudo service ntp start
```

***.bikes.enforcer.mil + *.cars.enforcer.mil + *.trucks.enforcer.mil**

With your transport systems that is axel mounted processors and hard drives etc. You may not always have the option to pool NTP services with it; if this is a limitation of your incar, intruck consoles but you are able to provide an NTP Feed from them that is fine..

Howevee if you have something like ntp.conf in /etc on the axel it is set up per allocated building the vechile is part of say we looking at newtown.station.enforcer.mil and all the vechiles available and on site have the

ability to have ntp.conf listed in something like /etc it would look like the following for the site:-

```
pool iu223.bikes.enforcer.mil iburst
pool ll566.bikes.enforcer.mil iburst
pool kss666.cars.enforcer.mil iburst
pool ace777.cars.enforcer.mil iburst
pool tic888.trucks.enforcer.mil iburst
pool toc999.trucks.enforcer.mil iburst
server 3.pool.ntp.enforcer.mil
server ntp.enforcer.mil
```

This would be install in Ubuntu the NTP services with the following command:-

```
$ sudo apt-get install ntp ufw -y
$ sudo ufw allow 123
$ sudo service ntp start
```

