

# LocalPose

Expose localhost using P2P  
Reverse Proxy Platform

WHITEPAPER

# Table Of Contents

---

Introduction.....	1
Blockchain and Cryptocurrency.....	1
Stellar (payment network).....	2
Internet and its issues.....	3
LocalXpose.....	5
How LocalXpose Actually works?.....	6
Why to use LocalXpose?.....	7
Demo.....	8
LocalXpose Token “LXP” .....	9
ICO.....	9
Team.....	10
References.....	10

# Introduction

---

The Internet was built around the premise of an open and shared environment. The Standards of the Internet assume that all of the hosts on the global Internet can connect directly to each other, on any specified port number, but current version of the internet has become increasingly centralized and much more controlled. This is eliminating a lot of real internet features, for example, running your website on your computer and show it to others. This is because of multiple factors such as port blocking, NAT, DNS and the frequently changing IP address which may compromise the original intent of ports.

We believe that everyone is having the right to open any port or communicate in any way on the internet. Taking the advantage of crypto-currency and peer-to-peer connection, we present our solution to solve the issues by letting anyone expose any localhosted services to the internet through the distributed nodes around the world.

## Section 1

---

### Blockchain and Cryptocurrency

Blockchain is a distributed database system that acts as an “open ledger” to store and manage transactions. Each record in the database is called a **block** and contains details such as the transaction timestamp as well as a link to the previous block. This makes it impossible for anyone to alter information about the records retrospectively. Also, due to the fact that the same transaction is recorded over multiple distributed database systems, the technology is secure by design.

With the above in mind, blockchain is **immutable** – information remains in the same state for as long as the network exists. [1]

Along with the Blockchain we have the cryptocurrency. Cryptocurrency is an electronic money created with technology controlling its creation and protecting transactions, while hiding the identities of its users.

Cryptocurrencies are a digital cash designed to be quicker, cheaper and more reliable than our regular government issued money. Instead of trusting a government to create your money and banks to store, send and receive it, users transact directly with each other and store their money themselves. Because people can send money directly without a middleman, transactions are usually very affordable and fast.[2]

## Section 2

---

### Stellar (payment network)

Stellar is an open-source protocol for exchanging money. Servers run a software implementation of the protocol, and use the Internet to connect to and communicate with other Stellar servers, forming a global value exchange network. Each server stores a record of all “accounts” on the network. These records are stored in a database called the “ledger”. Servers propose changes to the ledger by proposing “transactions”, which move accounts from one state to another by spending the account’s balance or changing a property of the account. All of the servers come to agreement on which set of transactions to apply to the current ledger through a process called “consensus”. The consensus process happens at a regular interval, typically every 2 to 4 seconds. This keeps each server’s copy of the ledger in sync and identical

So, who is using Stellar?

Several non-profits and businesses are implementing Stellar as financial infrastructure, particularly in the developing world. One such example is Praekelt Foundation, which will be integrating Stellar into Vumi, its open-source messaging app, to let young girls in Sub-Saharan Africa save money in airtime credits.

Oradian, a cloud-based banking software company, also plans to use the Stellar network to connect microfinance institutions (MFIs) in Nigeria

In December 2016 more partnerships were announced, including in the Philippines, India and West Africa.

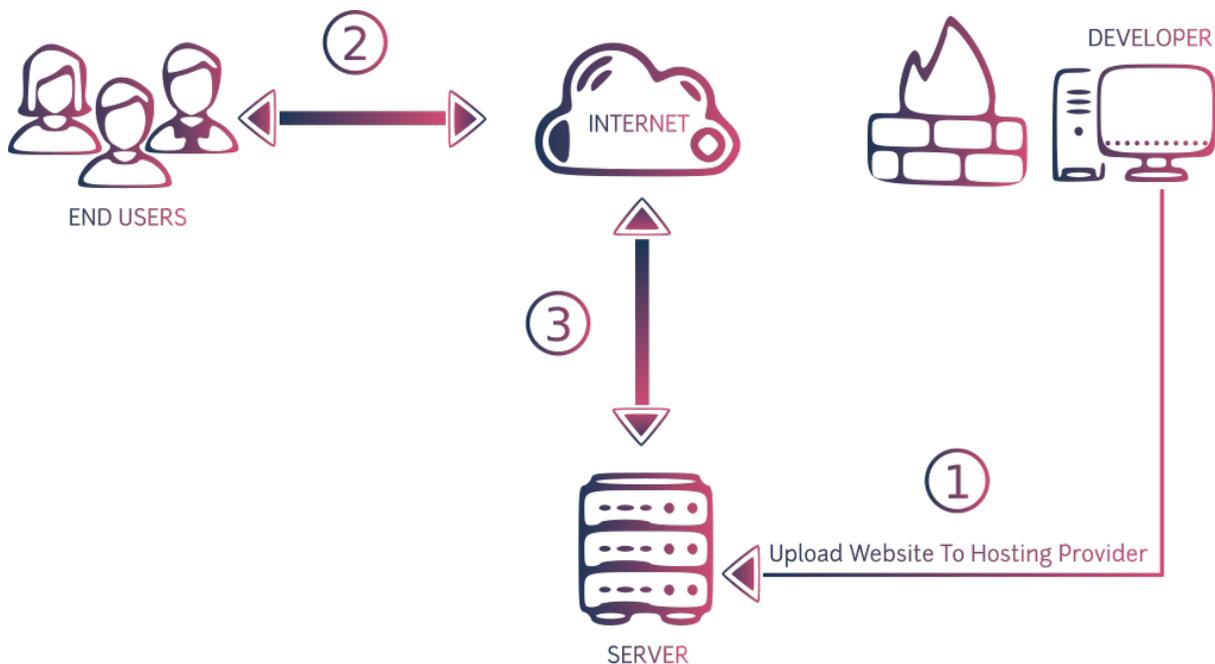
In the month of October 2017 Stellar and IBM created a partnership to increase the speed of global payments.[3]

## Section 3

---

### Internet and its issues

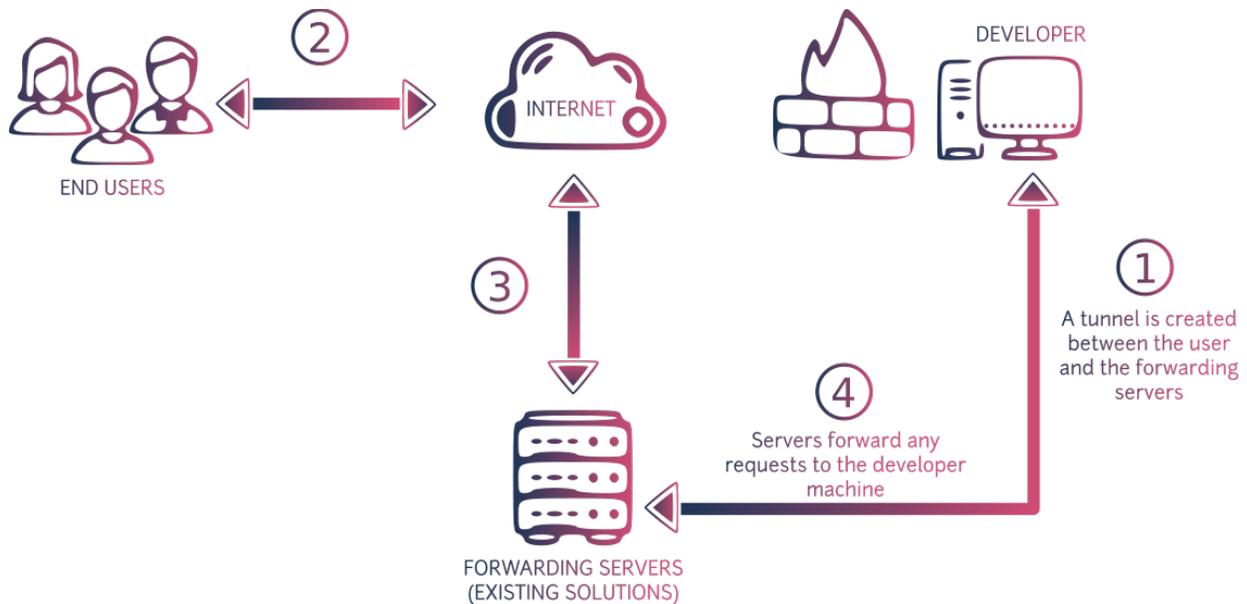
As we described at the beginning, The Internet was built around the premise of an open and shared environment. But it is not, yes you are still able to share files and do the hosting in a 3<sup>rd</sup> party service but it is not the perfect solution for everyone.



Let's suppose you are a web developer and you need to make a demo for the client, in this case you will have to send the html source code (for example) to the client or a team. But this is not a reliable solution, and you do not want to lose money and effort by hosting a demo online!. But what about exposing your localhosted website and just have a URL to give the client and serving him from your device itself.

Another scenario may happen is when a Gamer wants to invite his friend to play with him on his local hosted game (Minecraft for example), the existing solutions may not be practical enough or may not be easy to use, our solution can help on that too.

There are many scenarios people are facing issues due inbound connections and to overcome these problems user may required to install a software to give the access to his localhost or change a configuration setting, request an opt-out from the ISP, or to upgrade their level of service (for example from residential to business grade).



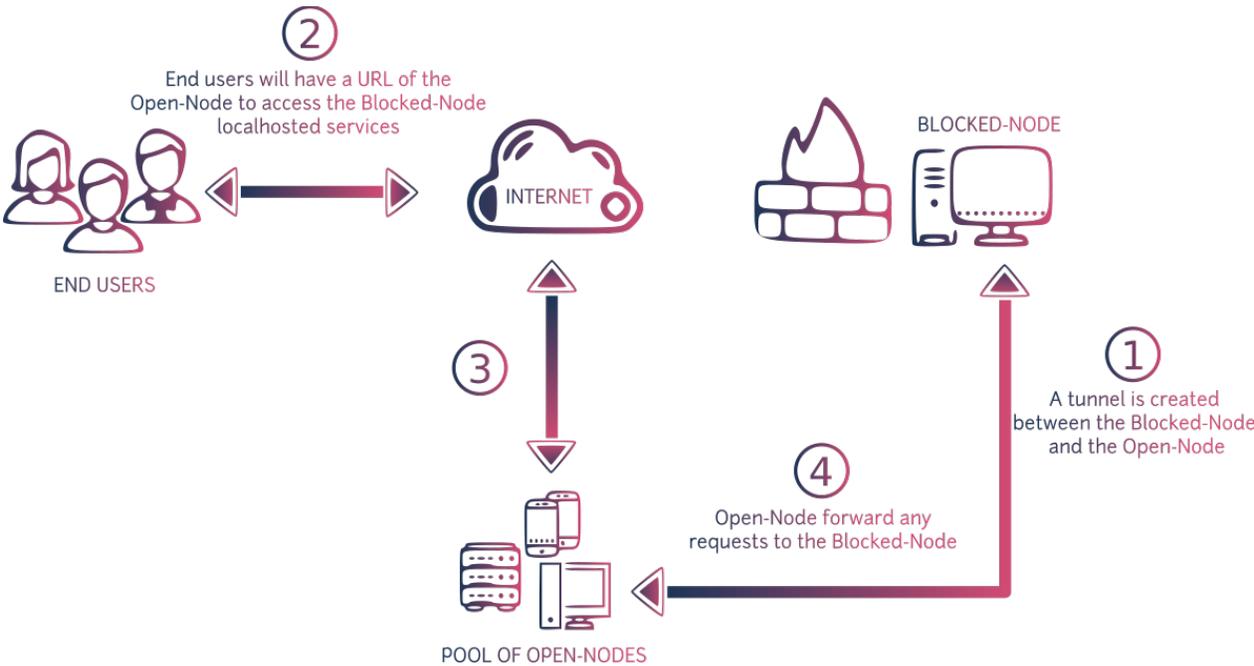
# Section 4

## LocalXpose

Taking the advantage of innovative technologies from the cryptocurrency and peer-to-peer connection we decided to build LocalXpose.

LocalXpose is a platform of distributed nodes around the world (countries that allow inbound connections) ready to rent their bandwidth and ports for the blocked nodes.

LocalXpose simply will build a tunnel between Blocked-Node and the Open-Node. So you, friends or clients will be able to connect to your localhosted services directly by only using a domain name.



## Section 5

---

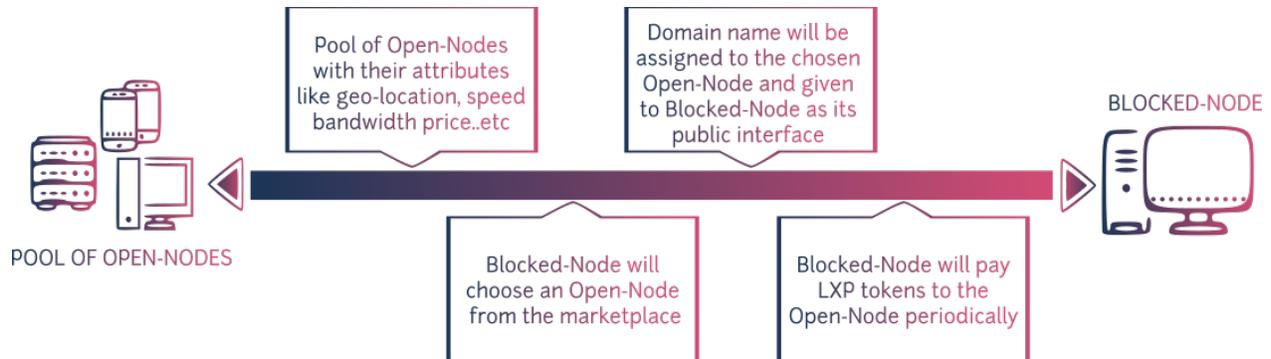
### How LocalXpose Actually works?

Before going further, we need to agree on some definitions:

**LocalXpose Blocked-Node** or simply **Blocked-Node** means a user exist in a country that does not allow inbound connection.

**LocalXpose Open-Node** or simply **Open-Node** means the nodes that exist in a country that allows inbound connections.

1. A Blocked-Node wants to expose a service hosted in his localhost.
2. The Blocked-Node needs the Open-Node's help to allow inbound connections to his localhost.
  - a. The Blocked-Node has the choice to choose an Open-Node from multiple countries (marketplace of Open-nodes).
  - b. The Blocked-Node is required to pay the Open-Node using LocalXpose tokens.
3. A tunnel will be built between Open-Node and Blocked-Node so the traffic can go through.
4. The Open-Node will have a domain name that will let the internet users reach the localhost.



# Section 6

---

## Why to use LocalXpose?

We are aware that there are few solutions out there can solve inbound connection issues but we are different and that's why we are here.

First of all, we believe that the privacy of the users is an important aspect and because of that we DO NOT share or store any of the user's logs. And Despite of other solutions, with LocalXpose you will pay as you go only. This will save your money when you are not using the service. Also if you are in one of the countries that allow inbound connections, you will have the choice to become an Open-Node and RENT your bandwidth to others. This also will give the Blocked-Node multiple location options. The Blocked-Node will have the ability to buy domain name or ssl certificate from within the app itself by his LocalXpose tokens. From the security side. LocalXpose is DDoS proof, unlike other centralized solutions. This is due the decentralized architecture of the network.

The below is a comparison between LocalXpose and other existing solutions:

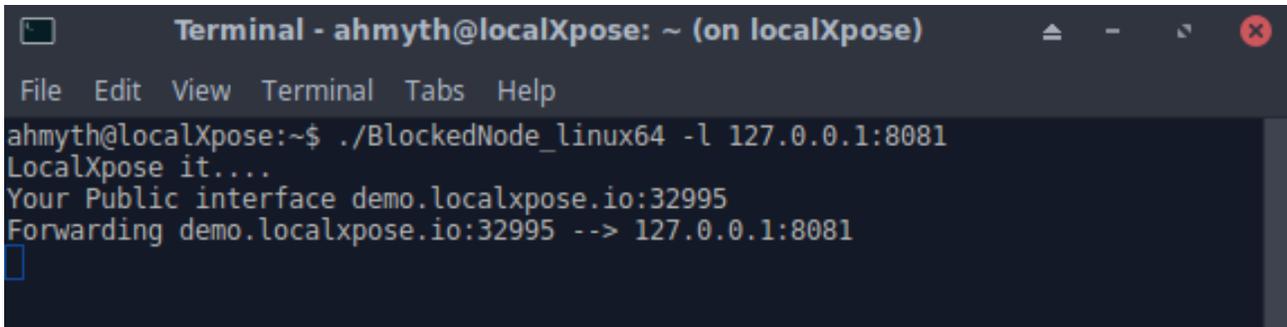
	<b>Localxpose</b>	<b>Competitors</b>
• Secure Tunnel	✓	✓
• Tunnel Authentication	✓	✓
• Custom Subdomain	✓	✓
• Custom Domain	✓	✓
• Cryptocurrency-Based P2p Platform	✓	✗
• Decentralized	✓	✗
• Availability (DDOS Proof)	✓	✗
• Locations Options	✓	✗
• Two Type Of Users (provider, Consumer)	✓	✗
		(only Consumer)
• Cross-Platform (Windows – MacOS – Linux - Android )	✓	✗
• SDK	✓	✗
• Bandwidth Marketplace	✓	✗
• Built-In SSL/TLS And Domain Name Market	✓	✗
• Pay As You Go	✓	✗

## Section 7

---

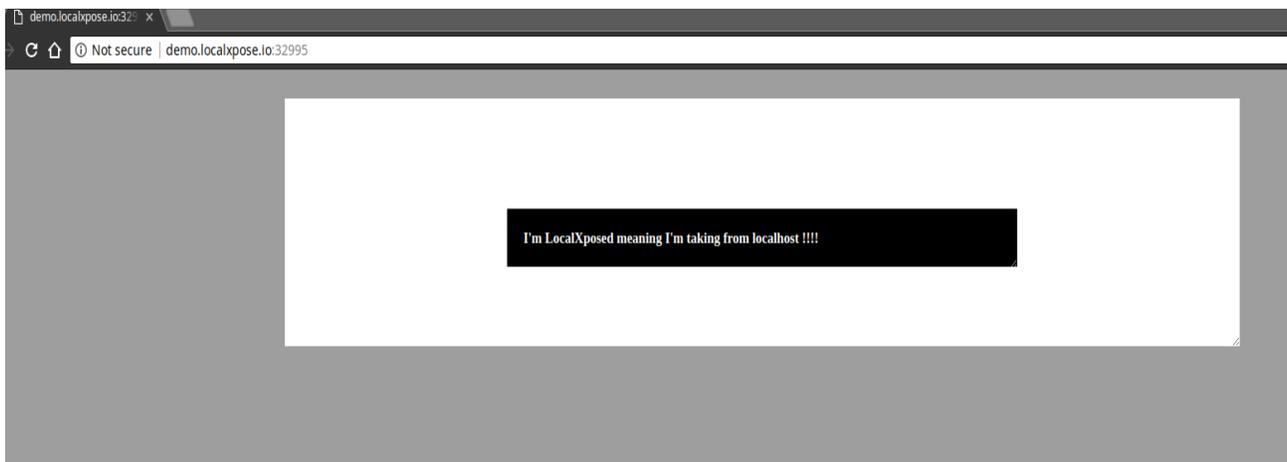
### Demo

we made a cross-platform cli demo to illustrate the idea, you can download it, It uses a predefined Open-Node and will forward all traffics to you on the port you specified, we will use the port 8081 for this demo which run a web server.



```
Terminal - ahmyth@localXpose: ~ (on localXpose)
File Edit View Terminal Tabs Help
ahmyth@localXpose:~$ ./BlockedNode_linux64 -l 127.0.0.1:8081
LocalXpose it...
Your Public interface demo.localxpose.io:32995
Forwarding demo.localxpose.io:32995 --> 127.0.0.1:8081
```

as you can see now I have domain name that I can use to access my localhost from the Internet. So by pasting this domain name on the browser url we can see that we accessed the website which is hosted locally.



# Section 8

---

## LocalXpose Token “LXP”

LXP is utility token based on stellar blockchain used in the localXpose platform as fuel to incentivize users to run the LocalXpose Open-Node server on their machine, LXP will be used as payment for serving the platform.

LXP holders also will be able to :

- Use them for trading in exchanges.
- Transfer to their Stellar wallets.

# Section 9

---

## ICO

Total Supply : 200,000,000

Softcap : 1000000

hardcap : 15000000

Abbreviation: LXP

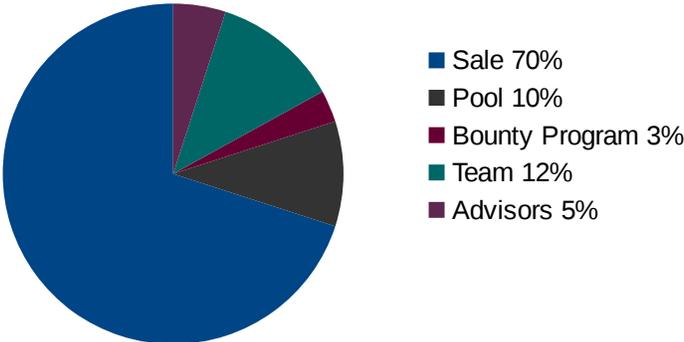
Sale Stages:

Private-Sale with 40% discount

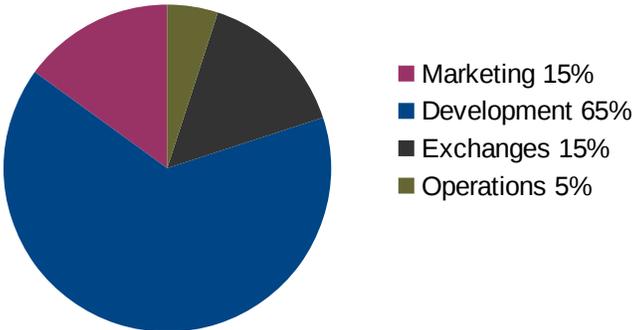
Pre-Sale with 30% discount

main sale with (20%,10%,5%,0%)

Distribution



Allocation



## Section 10

---

### Team

#### **Ahmed Al Hajri**

CEO & Co-Founder

Developer of the popular tool for testing android security (AhMyth), security researcher, blockchain expert and full stack developer.

#### **Omar Al Alawi**

COO and Co-Founder

Public speaker in infosec with 4 years experience in security, risk compliance specialist at Oman Data Park.

#### **Falah Al Lawati**

CDO

Software Engineer expert in web development, UX / UI Desinger.

## Section 11

---

### References

[1] Introduction to blockchains

<https://dzone.com/articles/introduction-to-blockchains-amp-what-it-means-to-b>

[2] Introduction to cryptocurrency

<https://decryptionary.com/what-is-cryptocurrency/introduction-to-cryptocurrency/>

[3] Stellar

[https://en.wikipedia.org/wiki/Stellar\\_\(payment\\_network\)](https://en.wikipedia.org/wiki/Stellar_(payment_network))