

# Under My Umbralla

*An end to end messaging  
application integrated with the  
nucypher network*

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# Benefits of Blockchain

- Decentralized system
- Immutability
- Security
- Transparency
- Append-only data structure – data cannot be altered or deleted

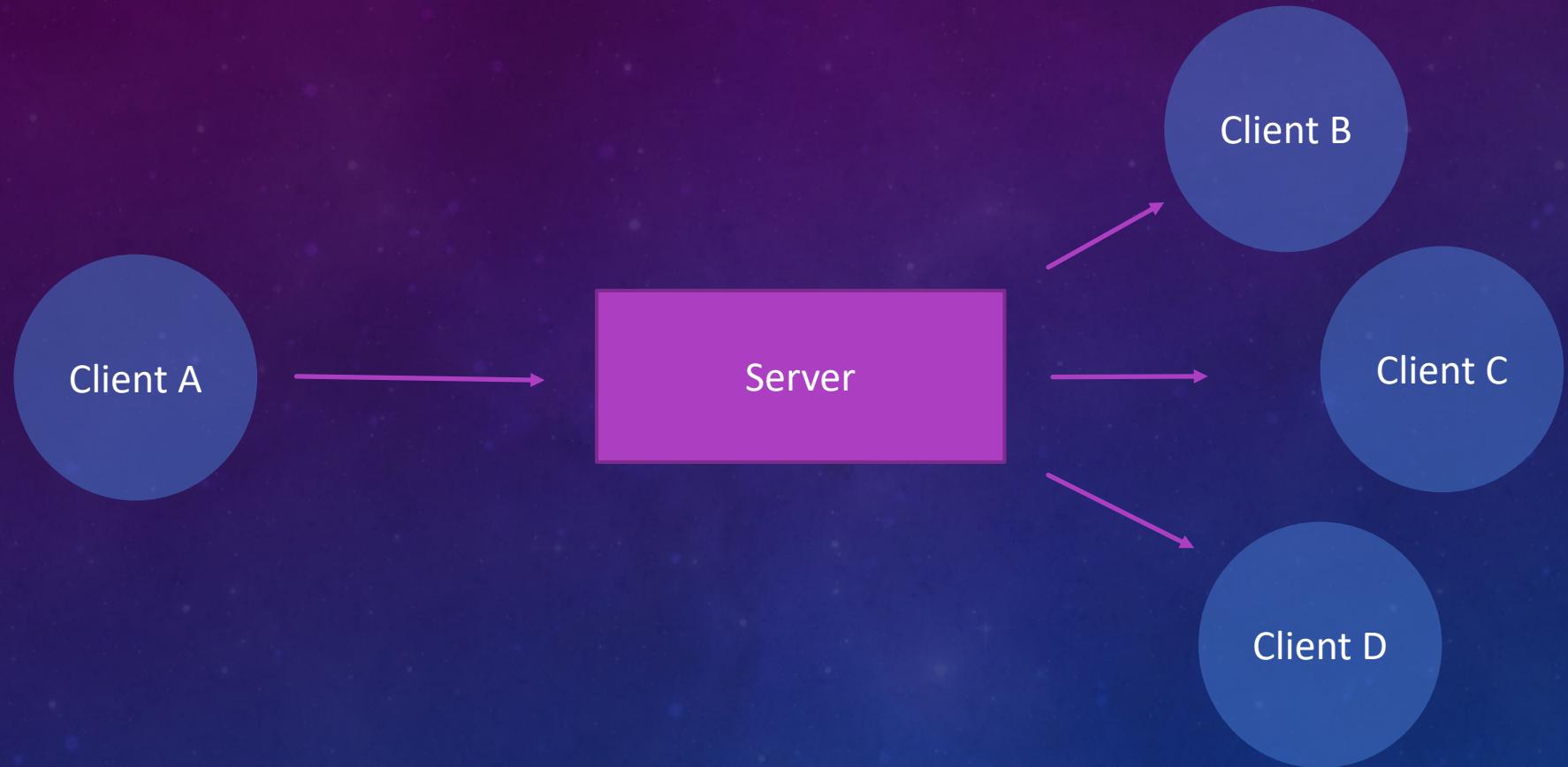
# Intro

- Under My Umbralla features a group messaging application with a nucypher network backend for proxy re-encryption and key management service
- Allows encrypted group communication
- Sender does not need to know the recipient ahead of time
- Scalability is at the heart of this systems, with ability to scale to N to N users

# Current Developments (MVP)

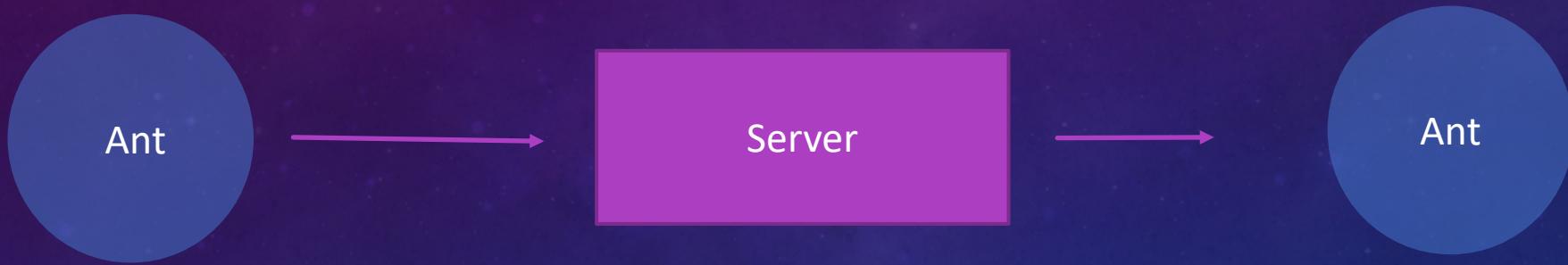
- Developed a Python application using sockets and Tkinter to send and receive encrypted messages across a network
- Use static IP addressing and allows instantiation of a nucypher network
- Allows deployment of policy
- Python Implementation: <https://github.com/MayankSur/FutureOfBlockChain>

# Client-Server Model

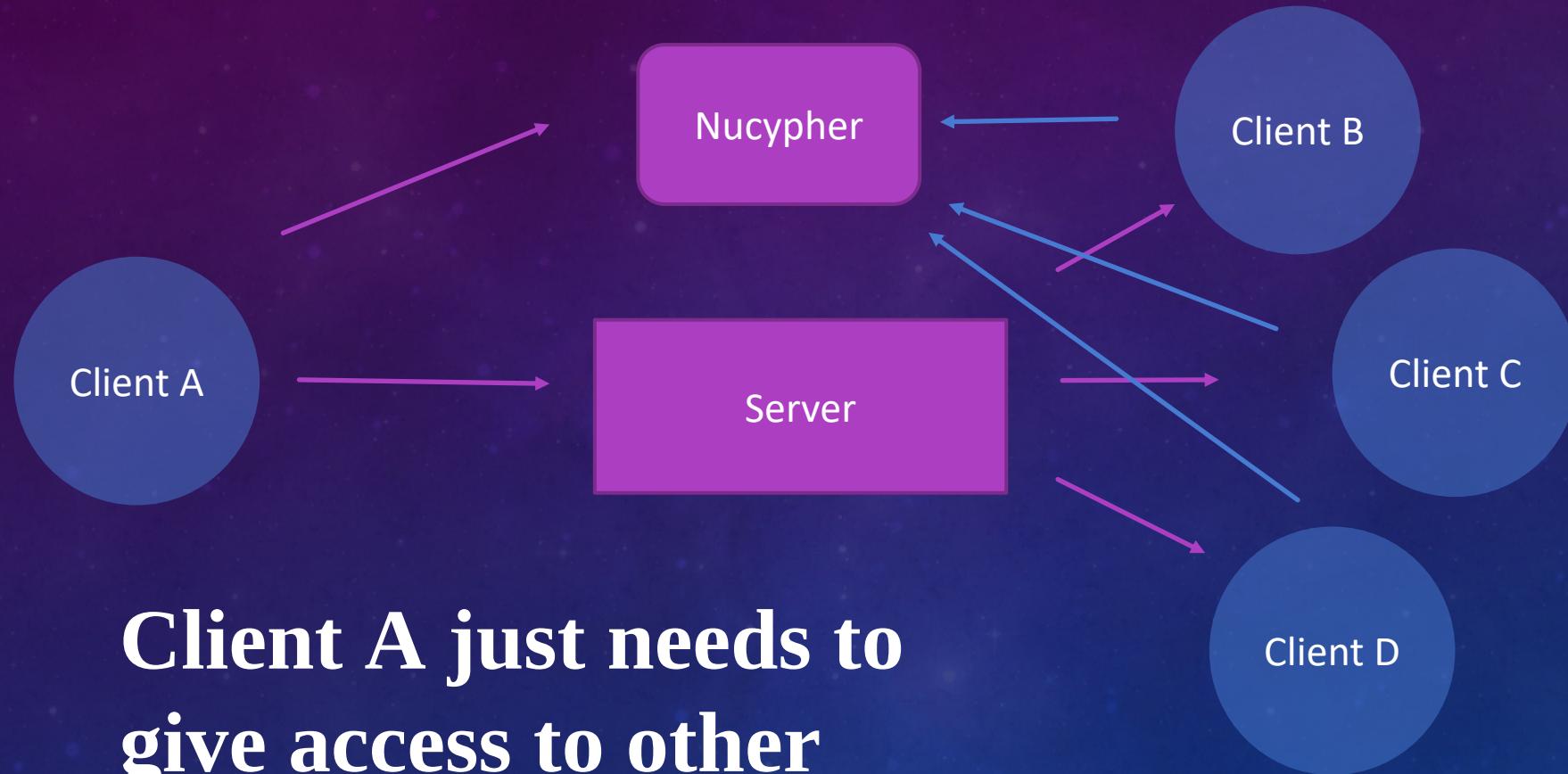


**Needs to know recipient and encrypt using their Public Key every time a message is to be sent !**

# Client-Server Model Demo

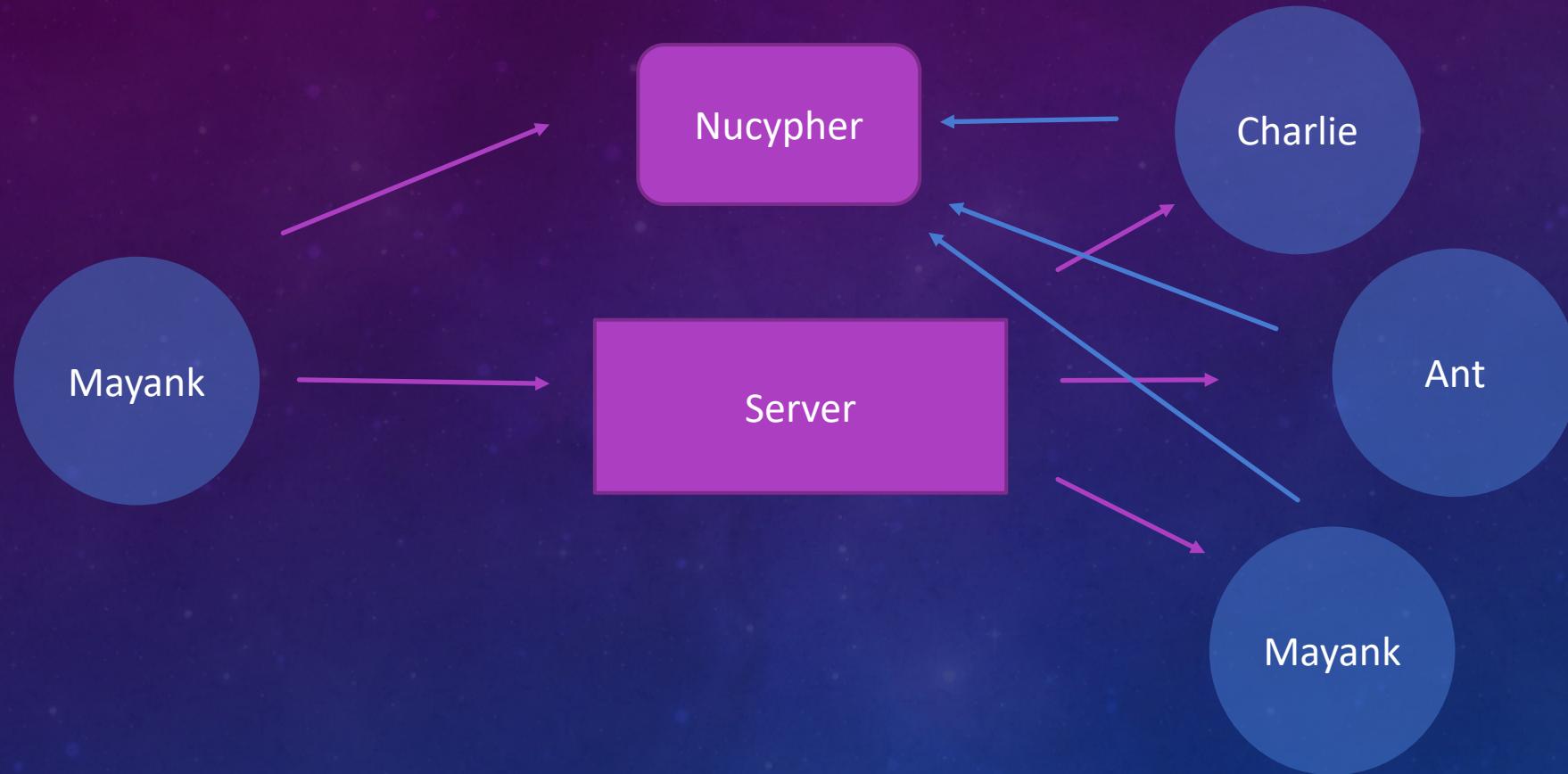


# Under My Umbralla Model



**Client A just needs to  
give access to other  
clients once**

# Under My Umbralla Model Demo



# Use Cases

- Office communication – “encrypted” Slack
- Schools – student data, researchers
- IoT – embedded system with multiple nodes

# Future Developments

- Develop a web application
- Use dynamic IP addressing
- Scale application for a large user base
- Python Implementation: <https://github.com/MayankSur/FutureOfBlockChain>