

Introduction



13. februar 2018



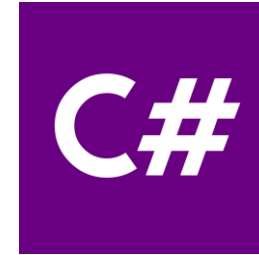
Professional me...



Software developer since March
2015
Part time at Champ



Finished engineering degree
January 2017
Teaching assistant since 3rd
semester



Working in software development
since 2008



Today...

Senior Software Developer
At Umbraco A/S

Prior experience



Software and test developer at Bang & Olufsen

External Consultant at Afrost

Web developer at nfrmtn (pronounced Information)

Software Consultant at Oxygen A/S

Senior Developer at Champ ApS

External Consultant at Saxo Bank A/S

Personal me...



- 27 years old
- Originally from Southern Jutland
- I love cats, I have two :D
- Got a wonderful girlfriend whom I also love!
- Deeply interested in Home Automation



Contact



Mail me → me@nbo.codes

Please do NOT use any other email than the one stated above, I will not answer any mails related to teaching here at SDU on other mails.

My expectations for you



Basic understanding of programming

- Both front-end and back-end

Clean and consistent code

- Including documentation

Well-founded decisions

- Please explain your choices

Works in all major browser

- i.e. Google Chrome, Mozilla Firefox, Safari and Microsoft Edge

What you can expect from me



1 assignment

Hands-on approach

- Exercises every lesson

Cutting-edge technology

- Hopefully this won't be outdated when you guys are done!
- At least that is my hope!

Group work

- 2-3 people in a group

Goal? Create a website!



My plan is to make you all create your own personal website.

The intention is to start at the client side and work our way to the server side.

You will be able to build upon your solution during the semester.

There will be one assignment, but I will release extra requirements during the semester.

How?



Work in groups of 2-3 people

I'll create groups on BlackBoard – if I'm able to...

Only one member has to hand in the assignment

You organize the groups yourself, you're grown ups!

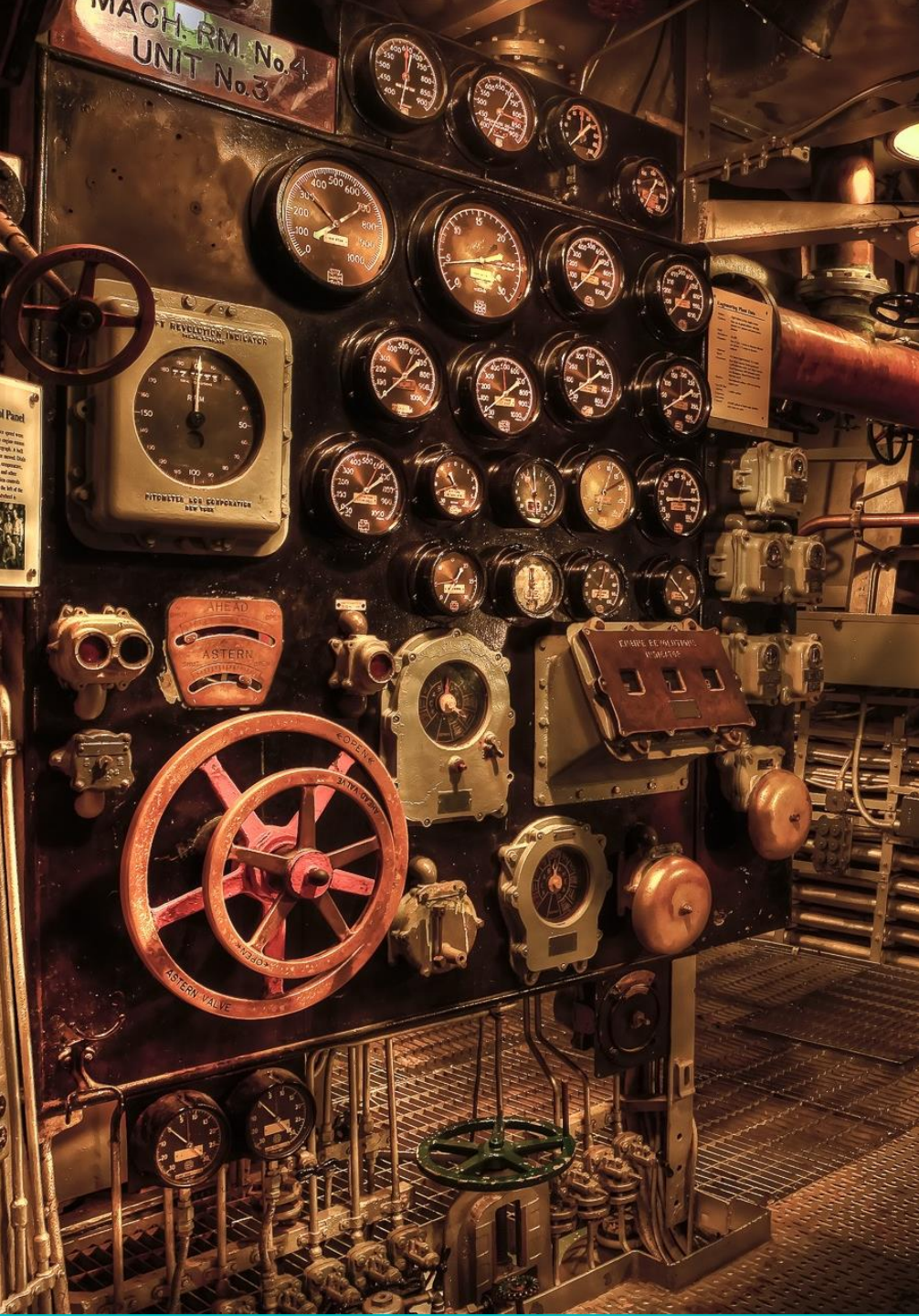
The hand-in will be a direct link to your github repository.

Getting ready



What you need:

- .NET Core SDK 2.0
- An IDE
 - JetBrains RIDER EAP (Cross platform)
 - Visual Studio 2017 (Windows only)
 - Visual Studio Code (Cross platform)
 - Omnisharp
 - Visual Studio for Mac
- A datastore
 - MSSQL Express
 - MySQL
 - PostgreSQL
 - MongoDB
 - Or any online service you know about
 - AWS S3, TableStore on Azure etc.



The history of the Internet

Precursor of the Internet



The Internet could not have existed without the two major inventions of the 19th Century:

- Electricity
- Telegraph system.

To a lesser degree, broadcast media such as radio and television

What is the Internet?



Plain and simple, it is a world wide system of interconnected networks and computers

Well... What is a network?



A computer network is best described as an interconnection of a group of computers

1969 - ARPANET



Based on work from MIT, RAND, NPL

Originally had 4 mainframes.

Connected using 50 kbps lines

First time computers was consistently communicating

More Computers were added.

First message sent said “Lo” → Should have been “Login” #error

Loading...

1969 - ARPANET



The internet was an accident

It is based on a unsuccessful result of a military research program

Loading...

1972 - Email



Invented by Ray Tomlinson

Loading...

1973 – A protocol is needed



Heterogeneous networks.

Communications would be on a best effort basis.

Communication forwarding by stateless routers/switches

No global control.

Loading...

1974 – TCP/IP



Invented By Cerf and Kahn

Became standard in circa 1980

Loading...

1978 – First MMORPG



MUD1 Multi-User Dungeon

A screenshot of the MUD1 Multi-User Dungeon game running in a DOSBox window. The window title is "DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: ADVENTUR". The game text is displayed in a monospaced font on a black background. The text includes an "Introduction" section, a paragraph about the game's development by Willie Crowther, Don Woods, Bob Supnik, and Kevin Black, and a prompt for the player to enter a command. The player's current location is described as "You are standing at the end of a road before a small brick building. Around you is a forest. A small stream flows out of the building and down a gully. In the distance there is a tall gleaming white tower." The prompt ">" is visible at the bottom of the screen.

```
DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: ADVENTUR

Introduction
Somewhere nearby is colossal cave, where others have found fortunes in
treasure and gold, though it is rumoured that some who enter are never
seen again. Magic is said to work in the cave. I will be your eyes
and hands. Direct me with commands of 1 or 2 words. I should warn
you that I look at only the first four letters of each word, so you'll
have to enter "NORTHEAST" as "NE" to distinguish it from "NORTH".
(Should you get stuck, type "HELP" for some general hints. For infor-
mation on how to end your adventure, etc., type "INFO".)

-----
This program was originally developed by Willie Crowther. Most of the
features of the current program were added by Don Woods. The current
version was done by Bob Supnik. This version was implemented on the
IBM-PC (and compatibles) by Kevin Black.

-----
For further information consult your scroll (READ.ME).

-----
*GOOD LUCK!*

-----
You are standing at the end of a road before a small brick building.
Around you is a forest. A small stream flows out of the building and
down a gully. In the distance there is a tall gleaming white tower.
>
```

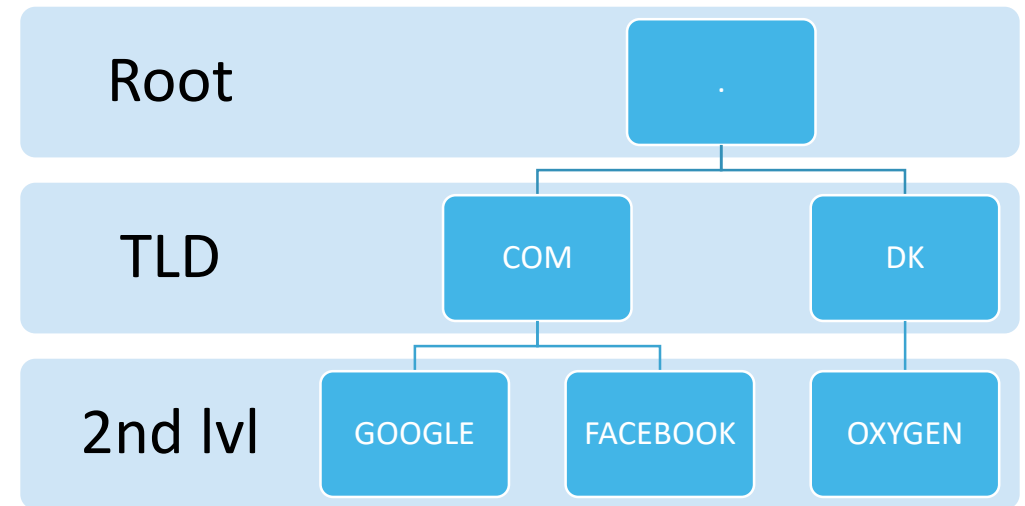
Loading...

1983 – Domain Name System



A hierarchical decentralized naming system

A system for translating human readable server names into addresses.



1989 – World Wide Web



Invented by Tim Berners-Lee @ CERN

HTML, HTTP, URI

First Browser

First web server



Loading...

1994 – Web for everyone



Personal computers became popular

Internet connections at home

E-commerce started to emerge

Loading...

1998 - Google



Started in september 1998

Search engines sucked at the time

Focused on analysing content instead of keywords



Loading...

2002 – Web 2.0



Easy to access

User created content

Dynamic websites

RSS 2.0

Loading...

2003 – Social media



Who have been on a social media since I started this lecture?

Twitter, Facebook, 500px, Instagram, Baidu, Wikipedia, LinkedIn, etc

Loading...

2007 – Going mobile



Apple introduced the iPhone

WAP was replaced by GPRS

Today we have LTE (4G) (Soooo fast, 5G up next!)

Advent of responsive web design

Loading...

2013 - Internet of Things



Everything is connected.

Heterogeneous devices

Loading...

Internet of Today



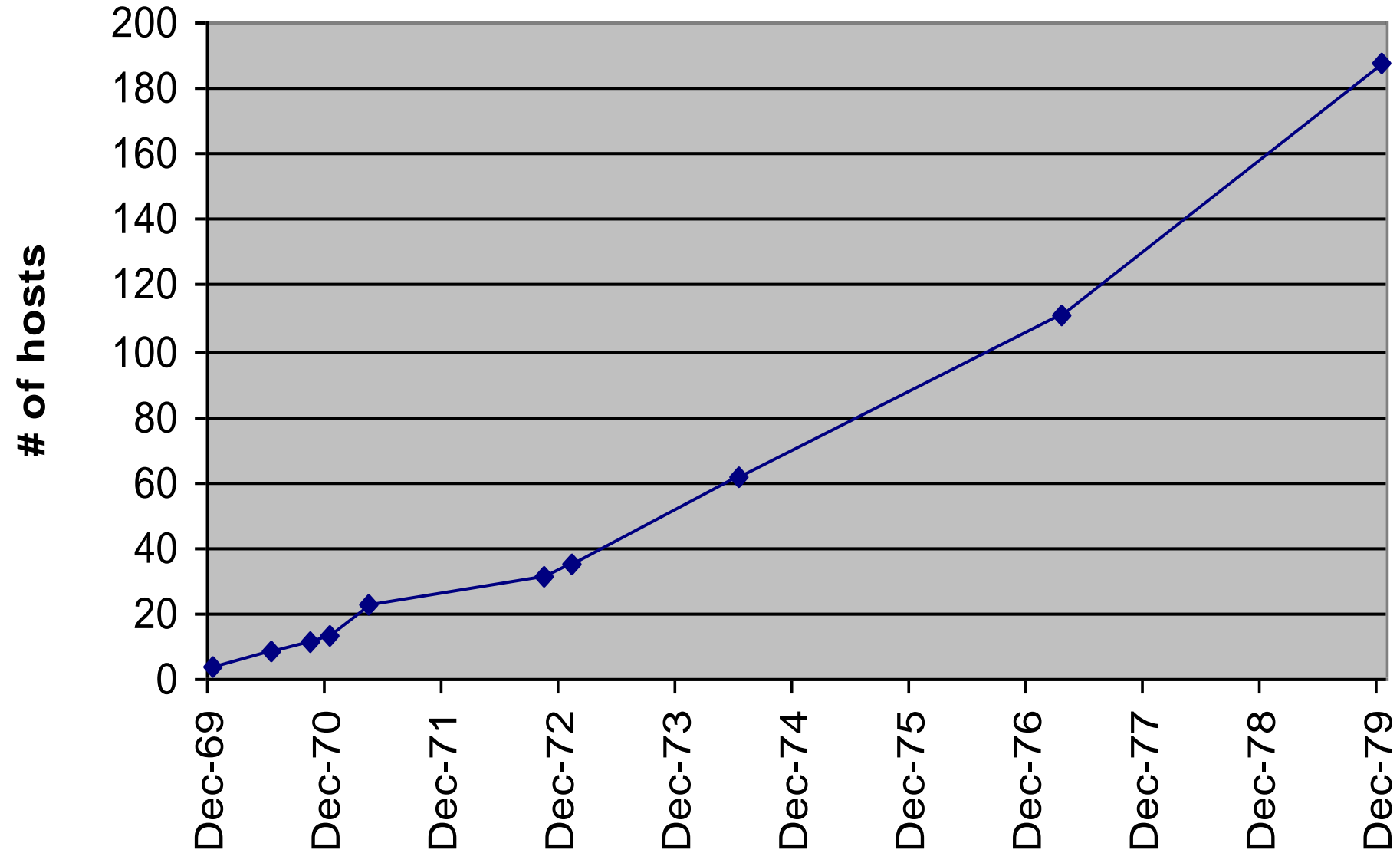
Omnipresent

Vital infrastructure in many parts of the world.

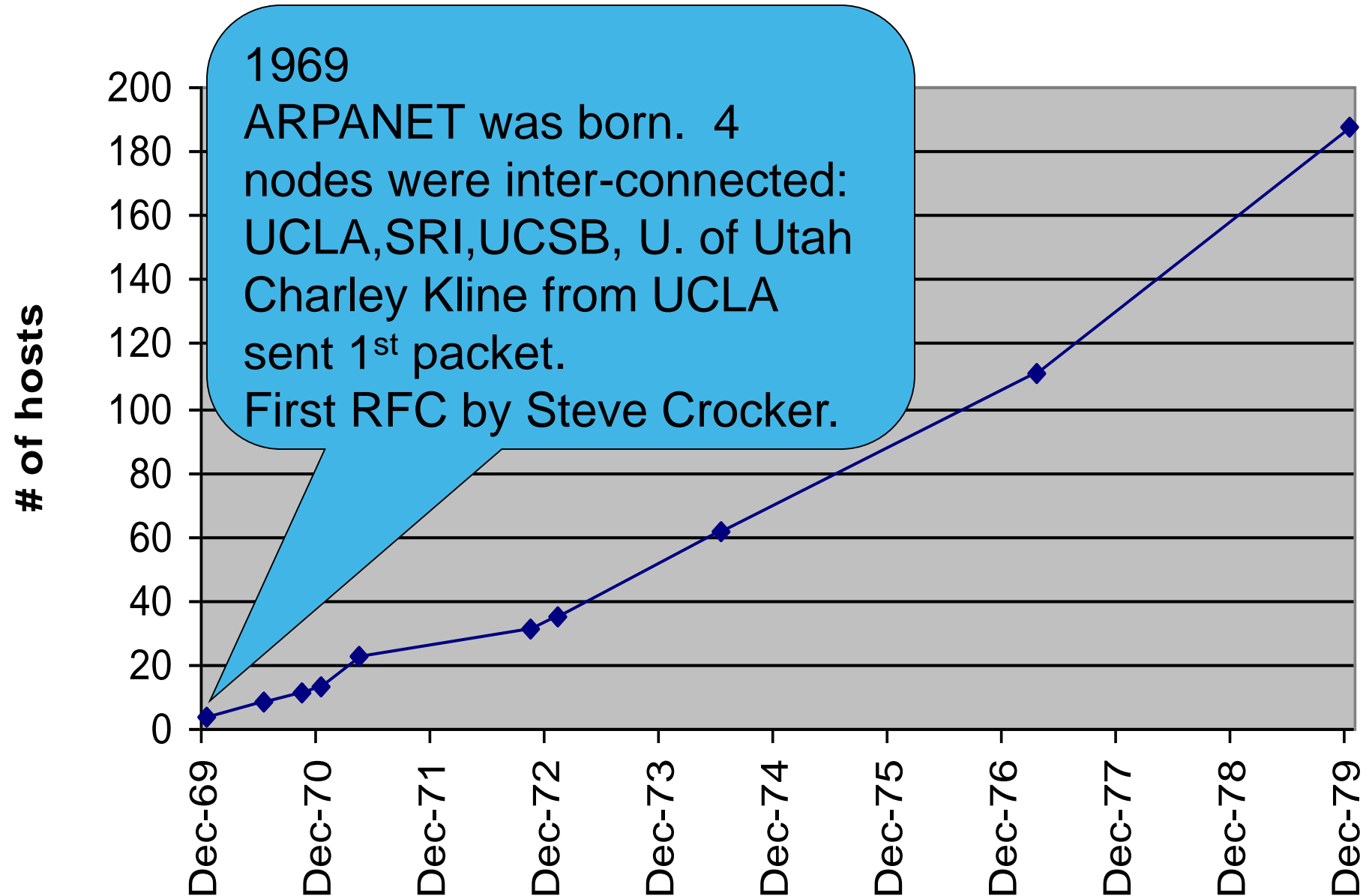
40% of the world's population are connected.

Complete!

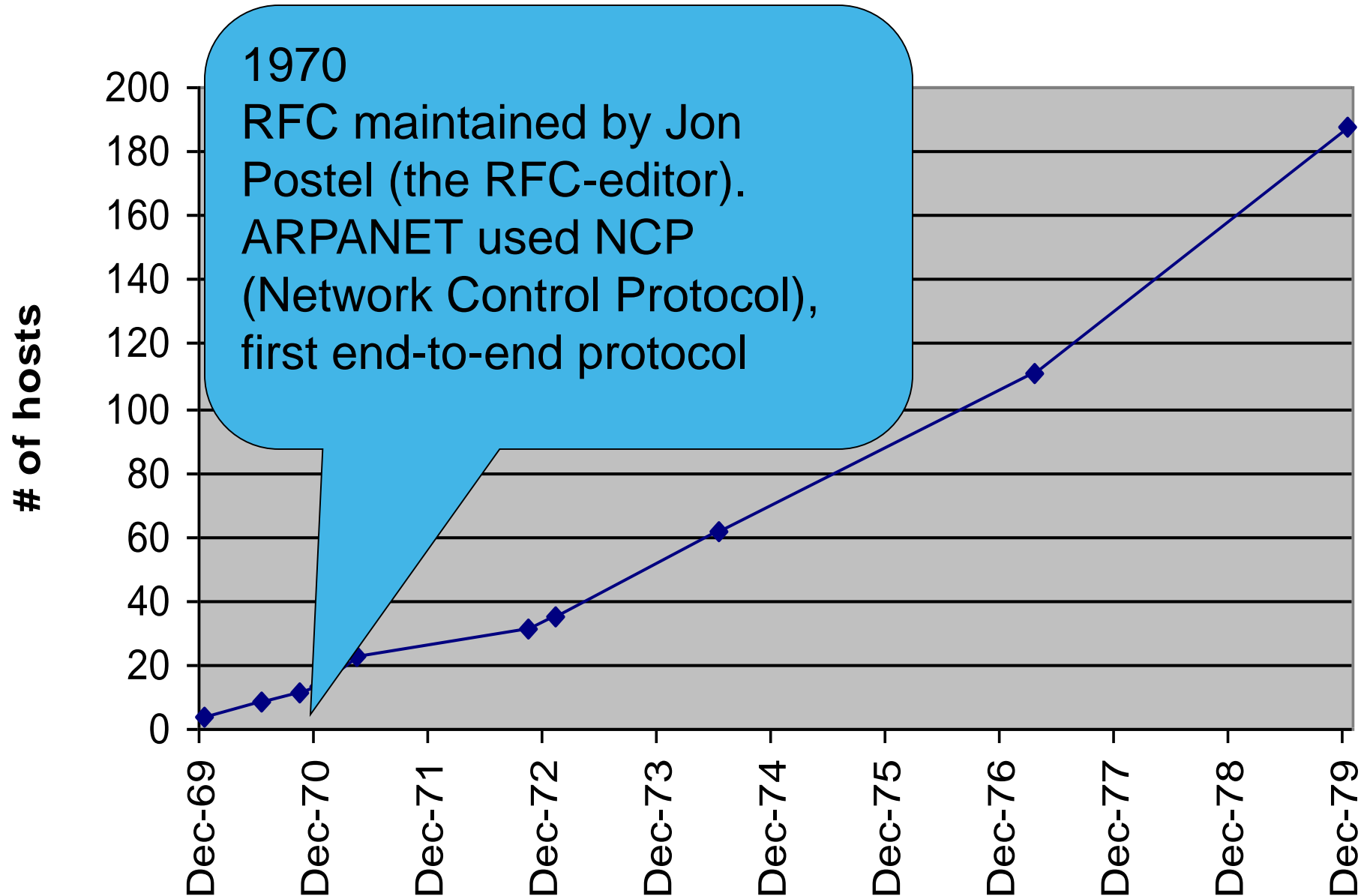
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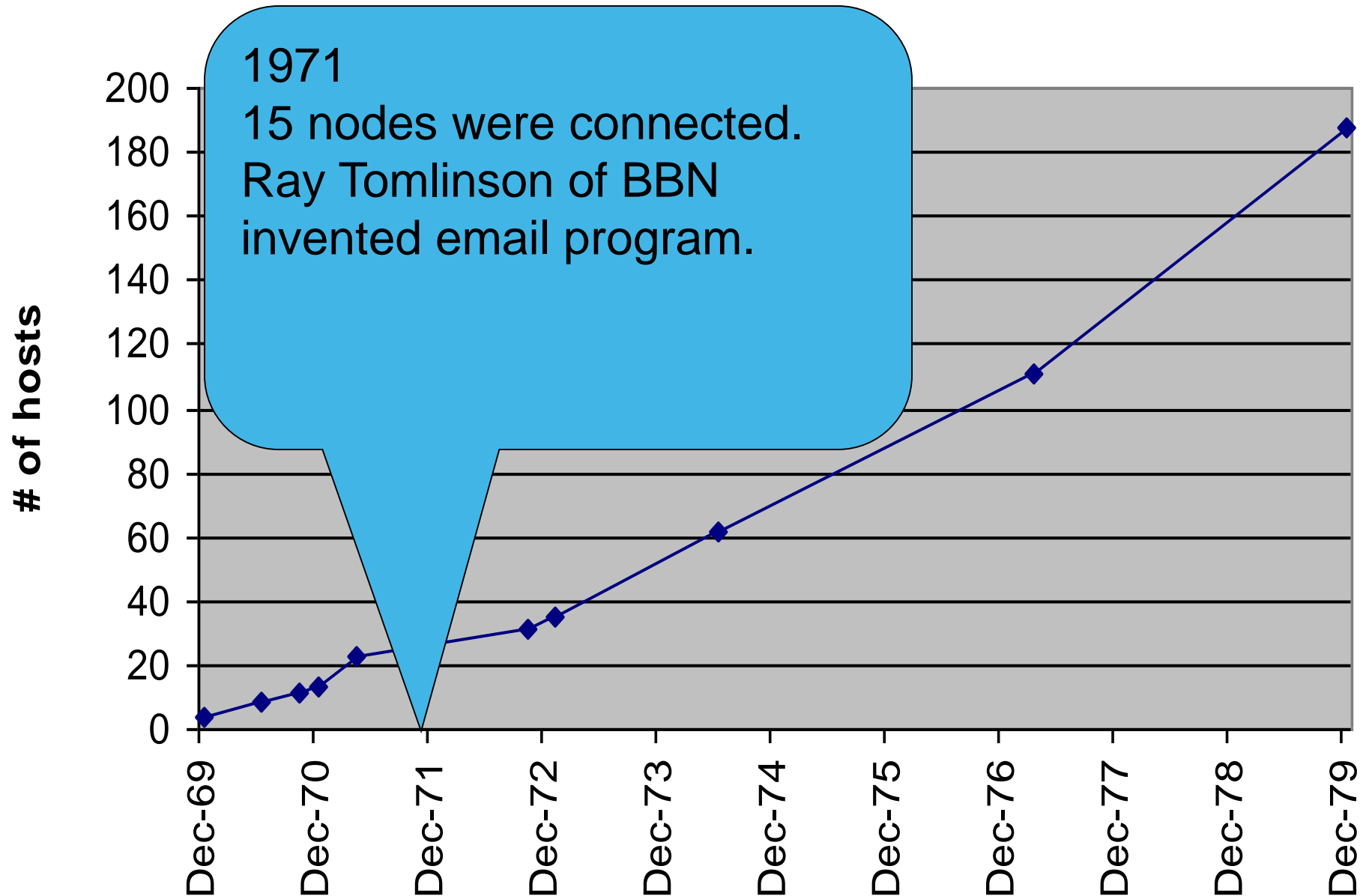
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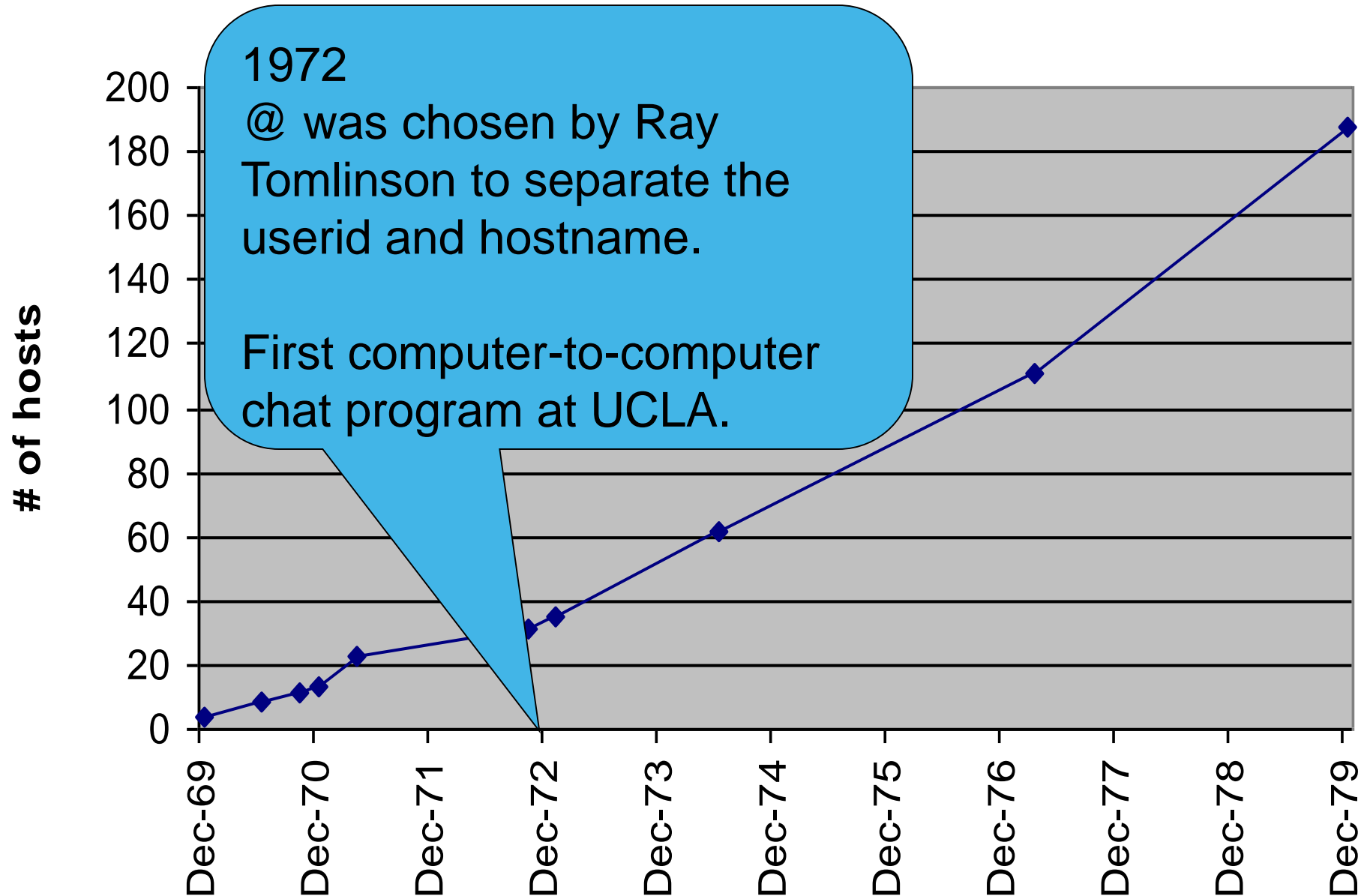
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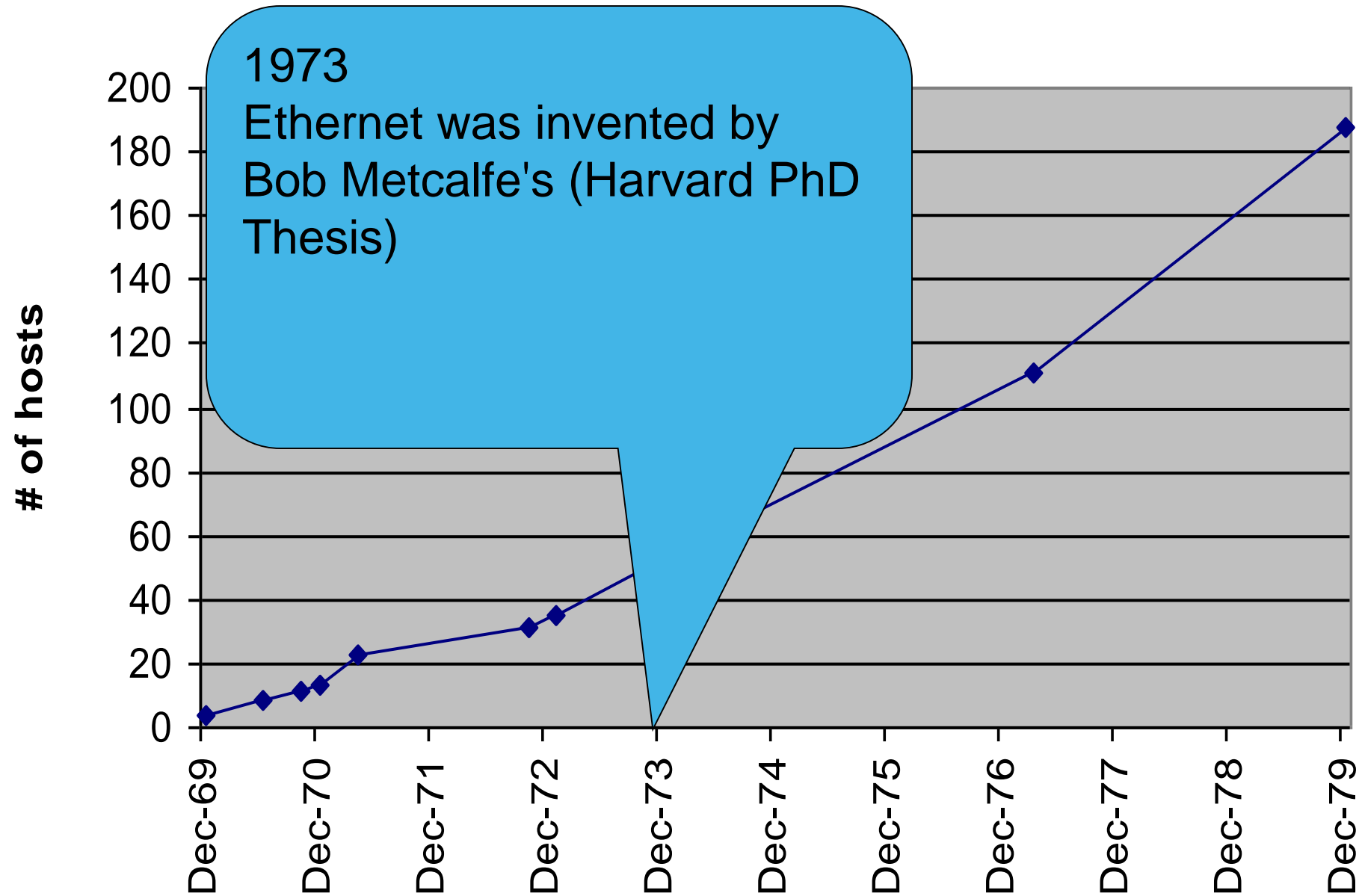
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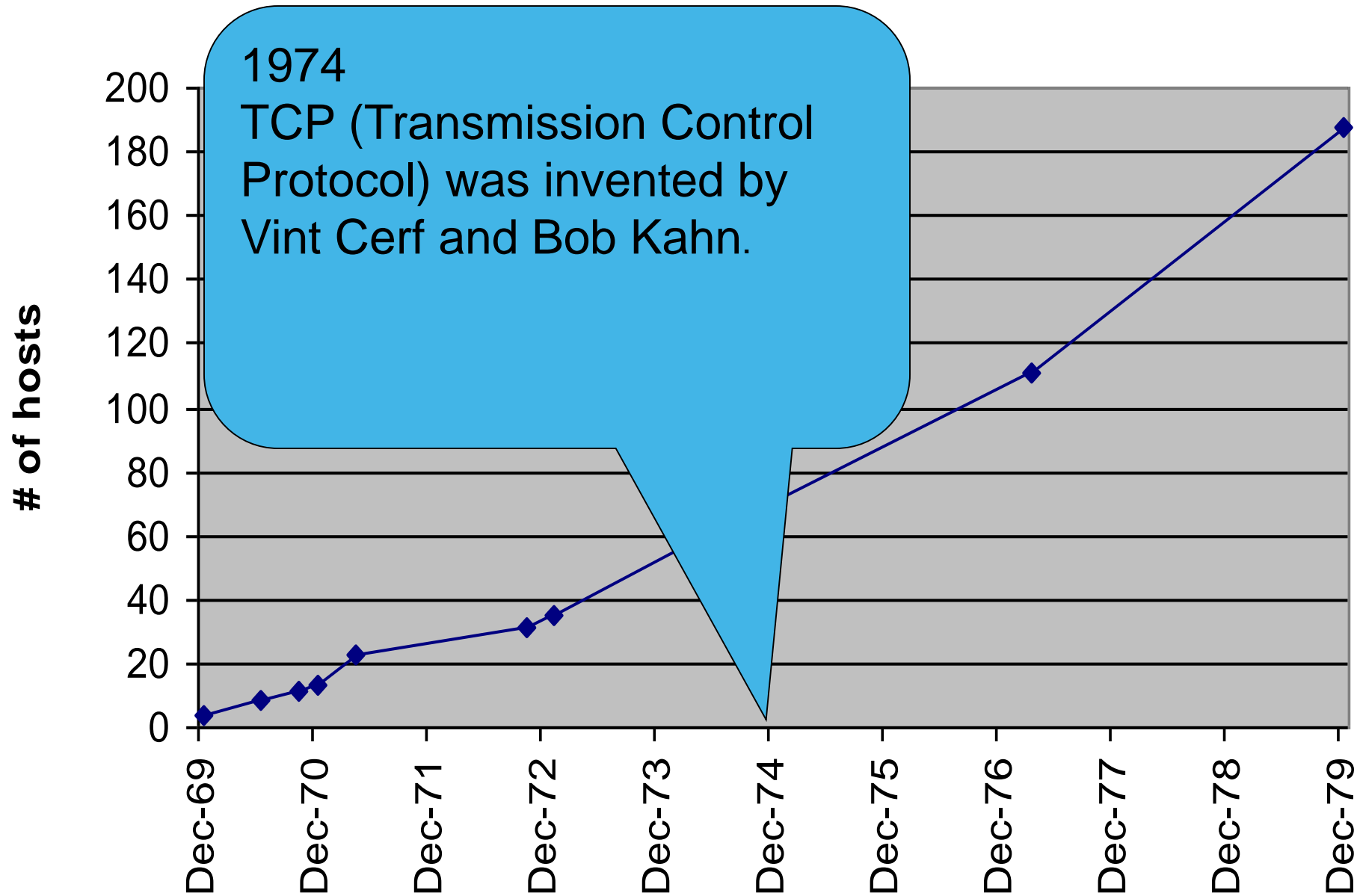
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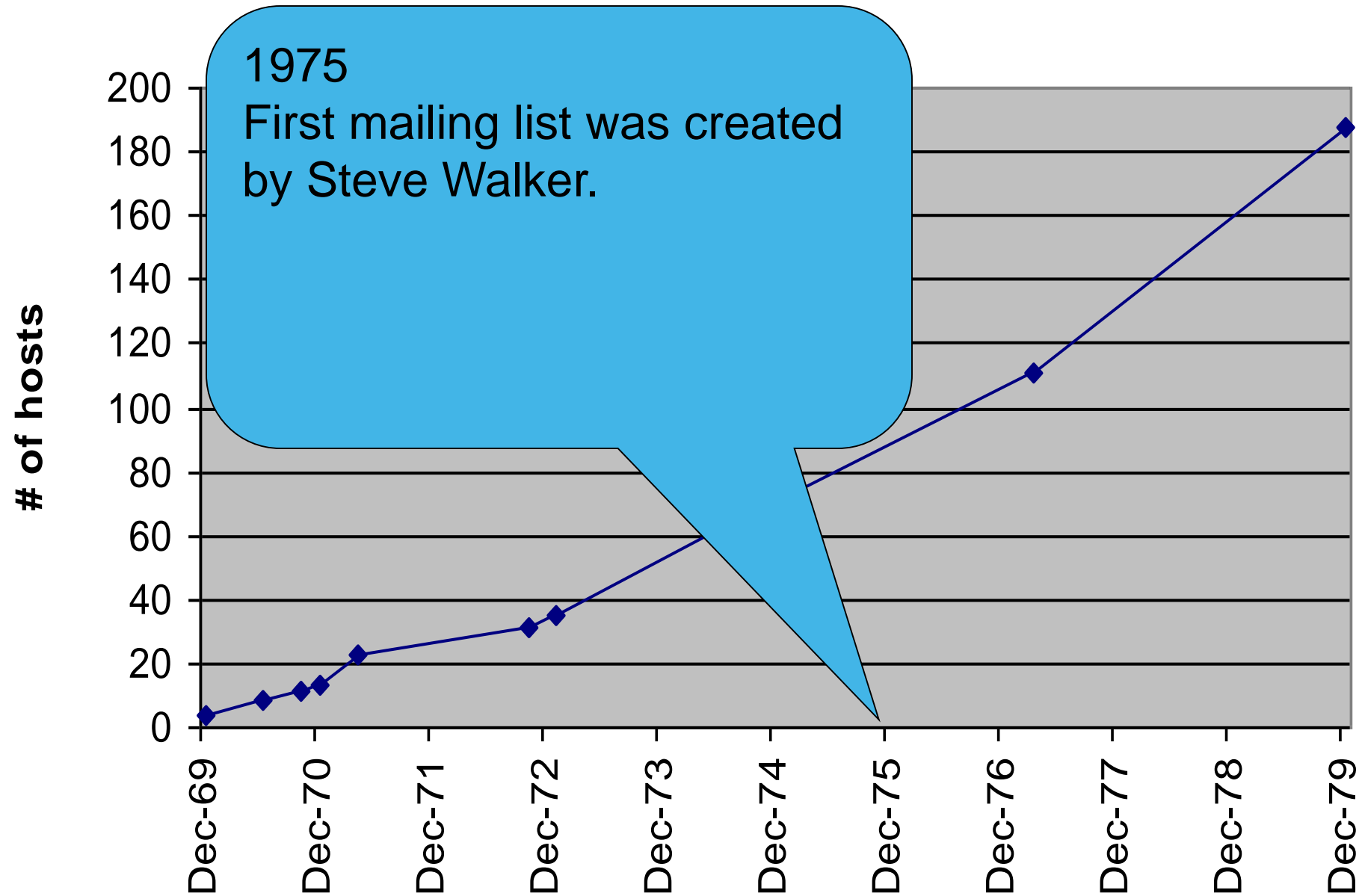
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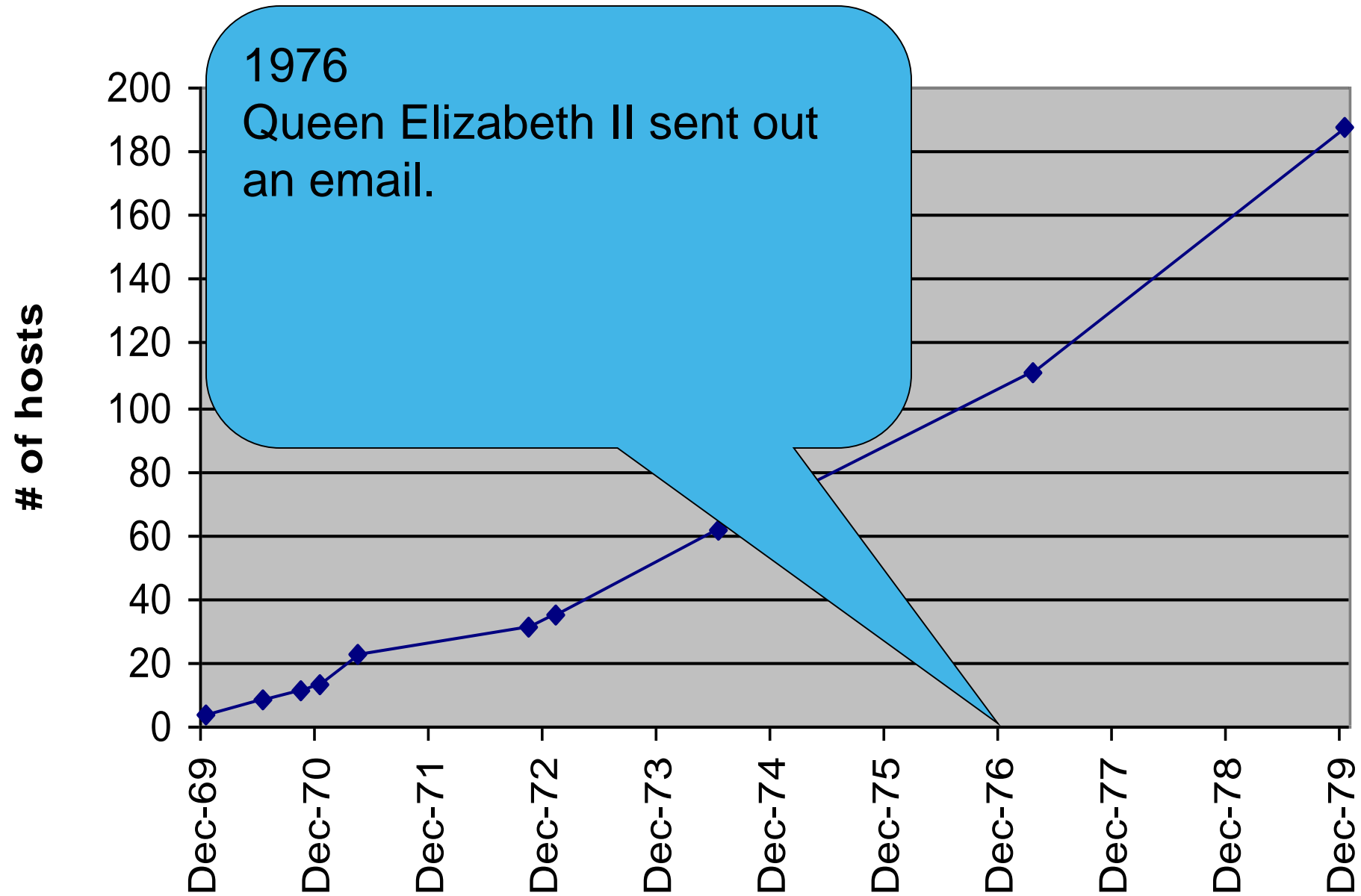
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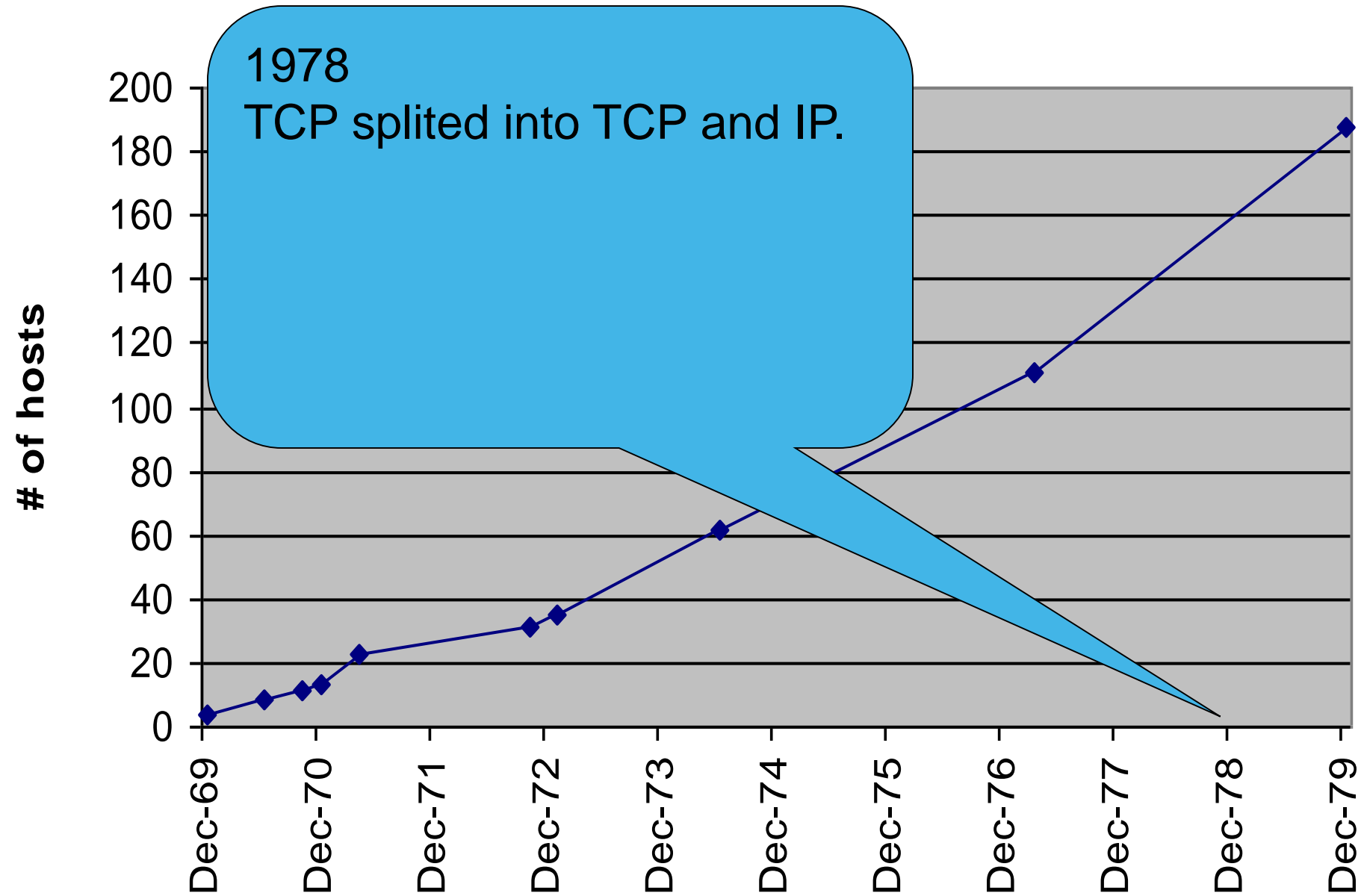
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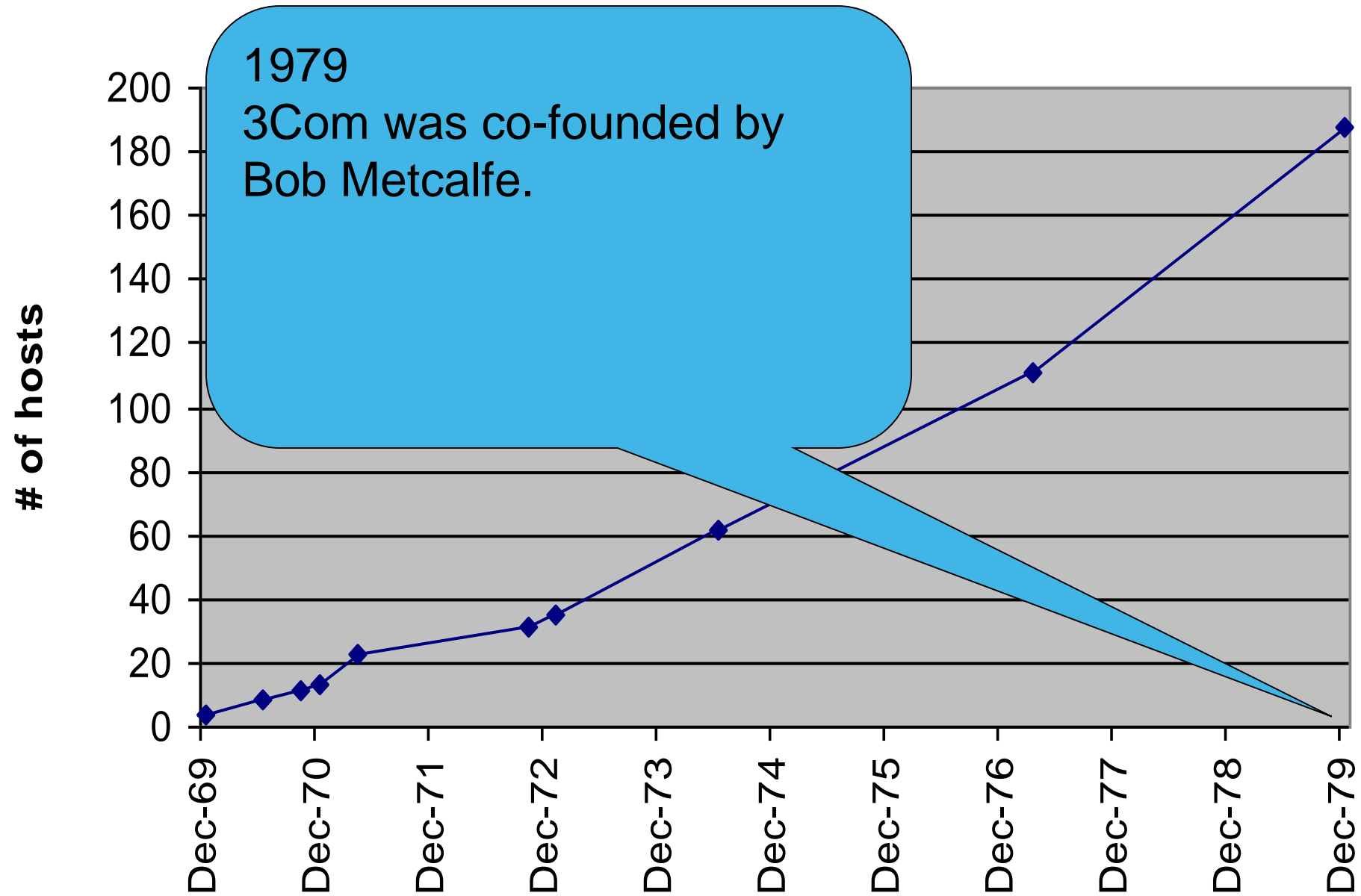
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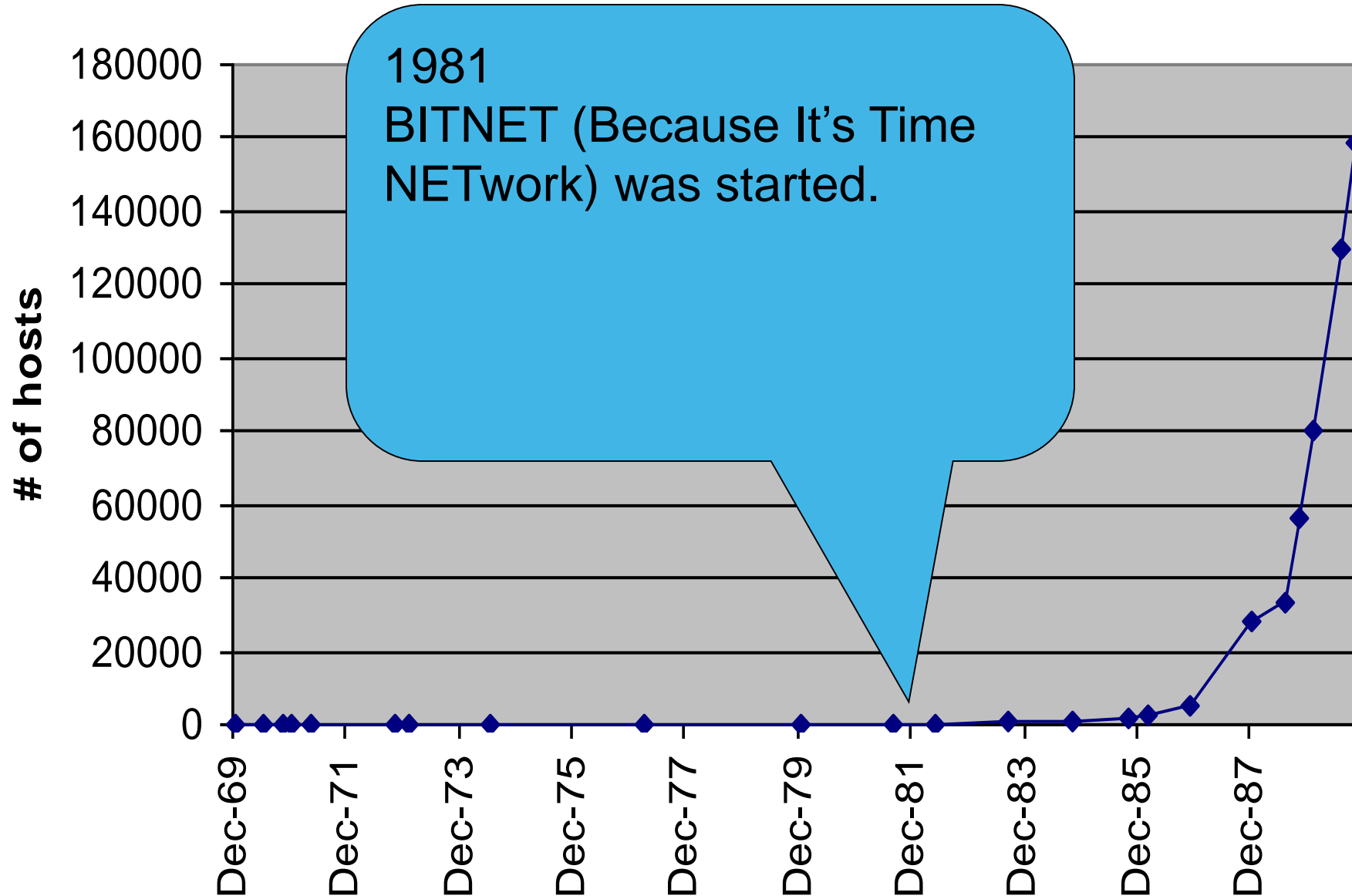
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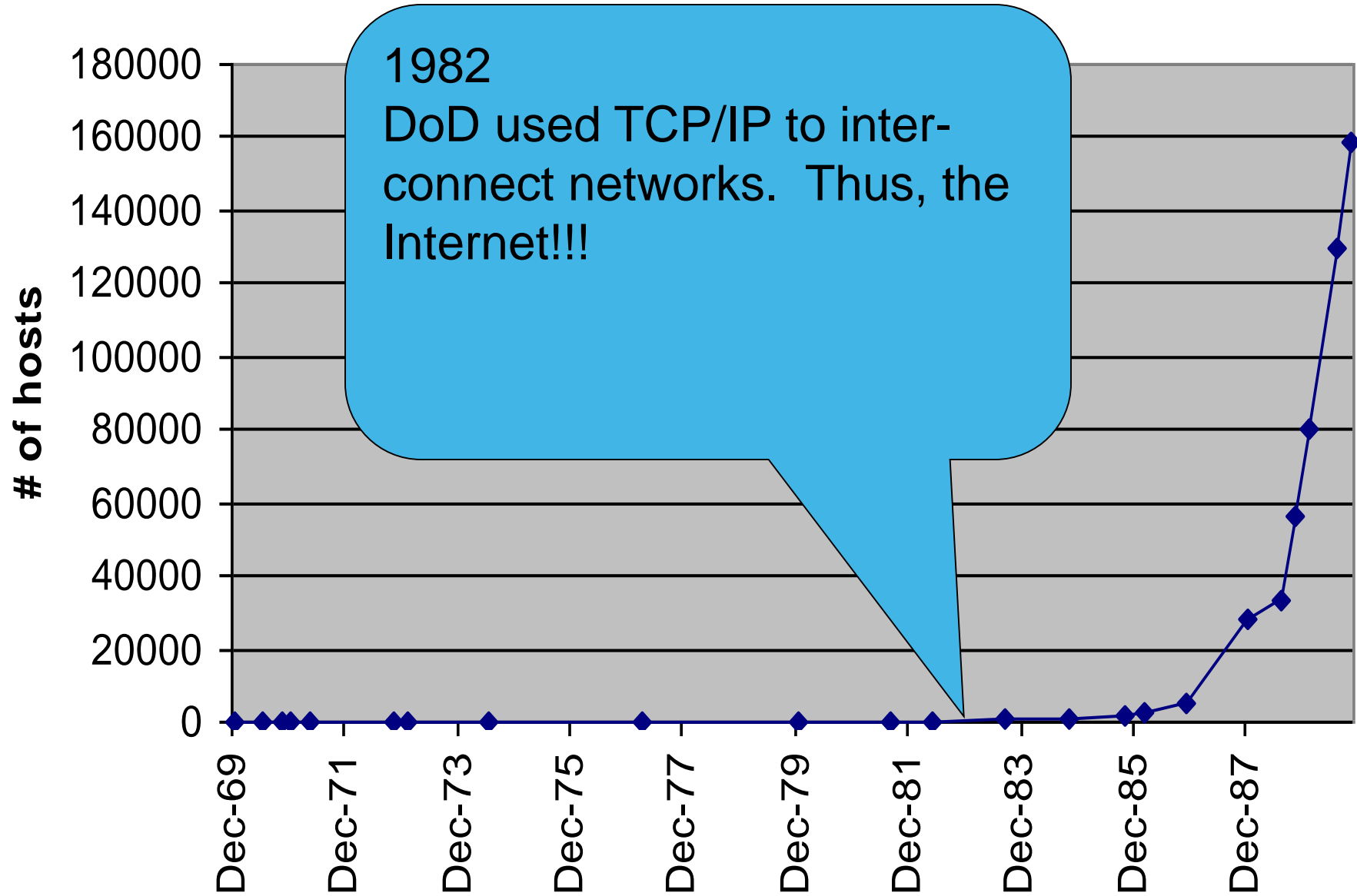
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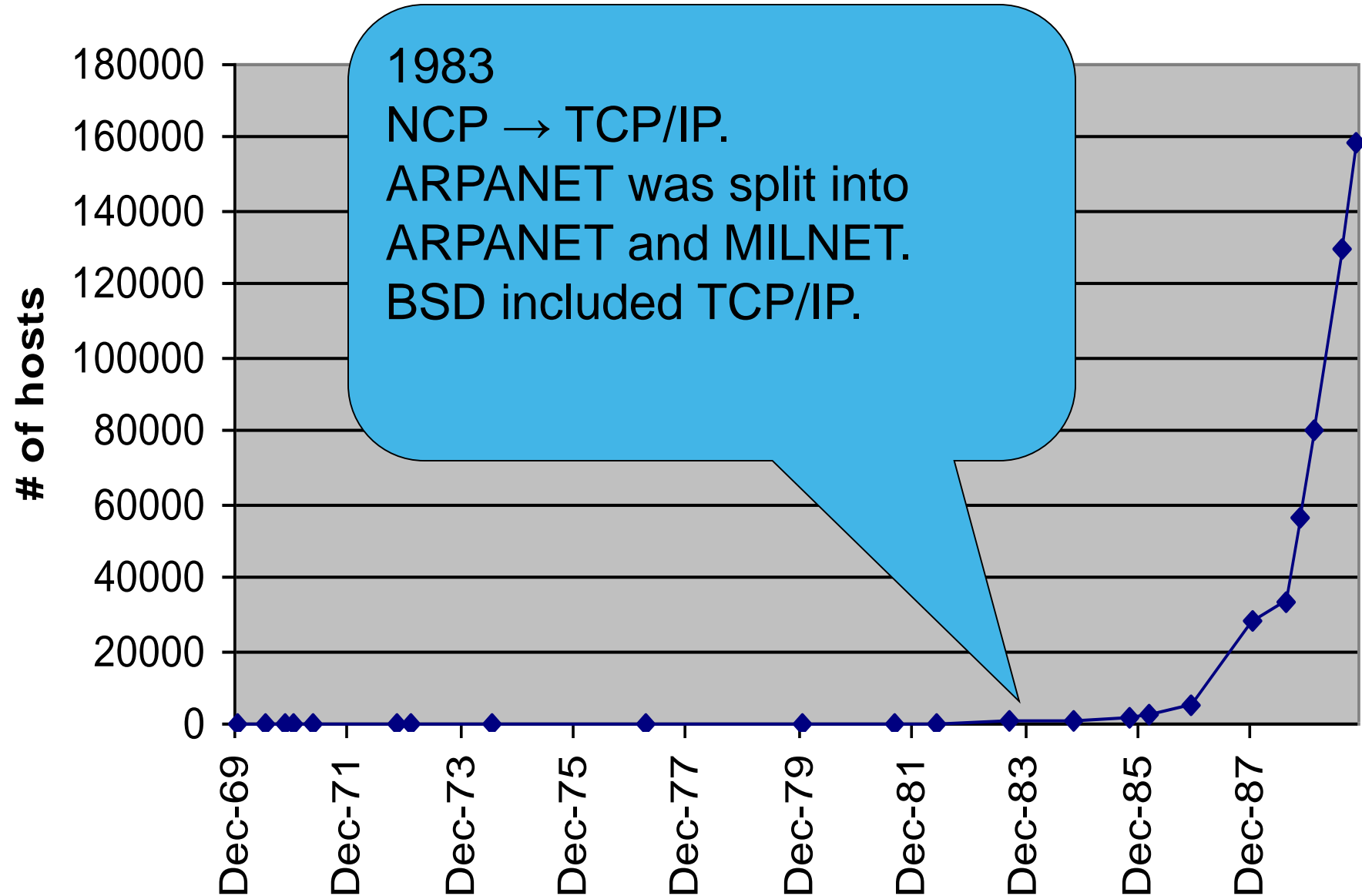
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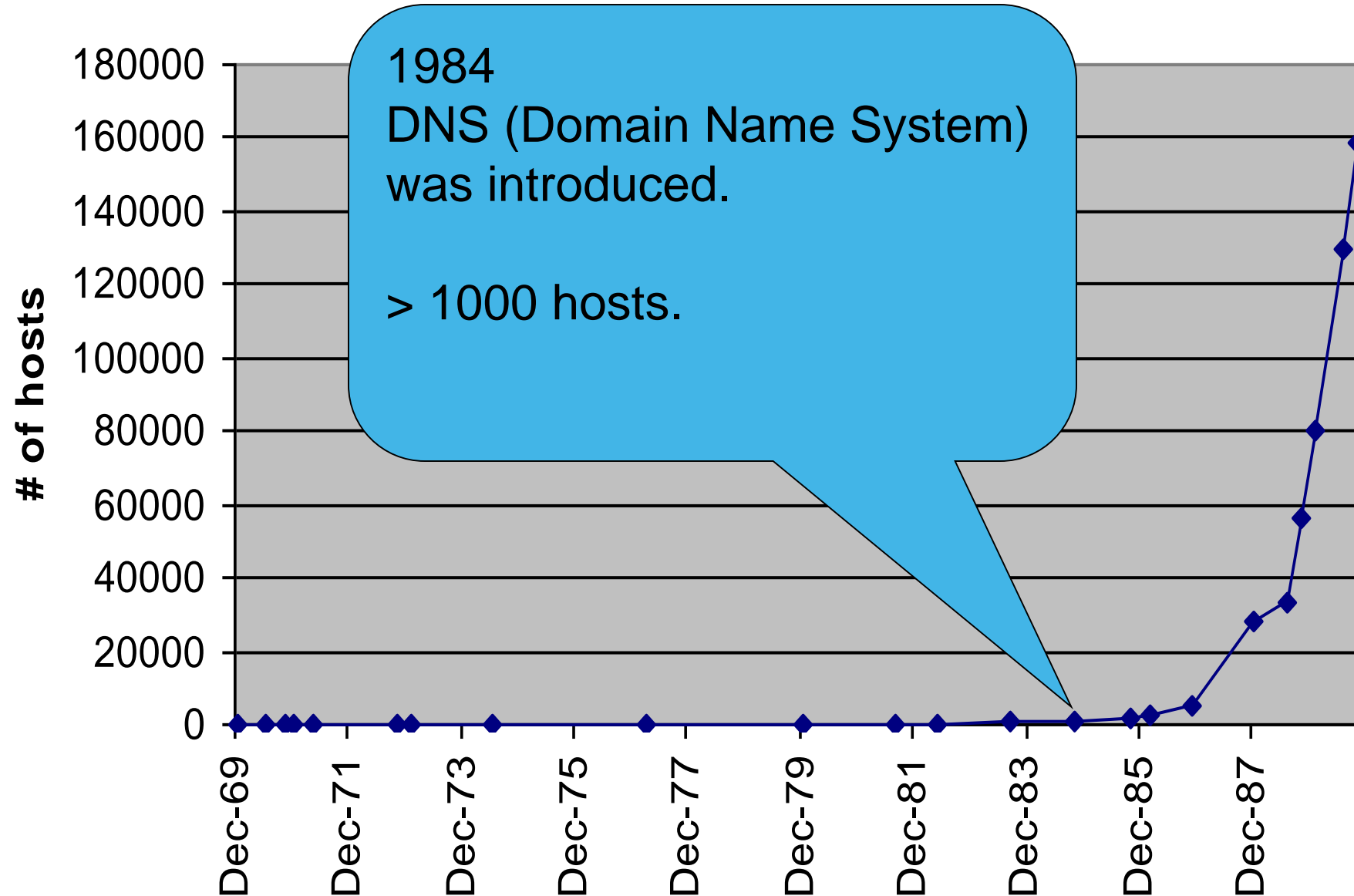
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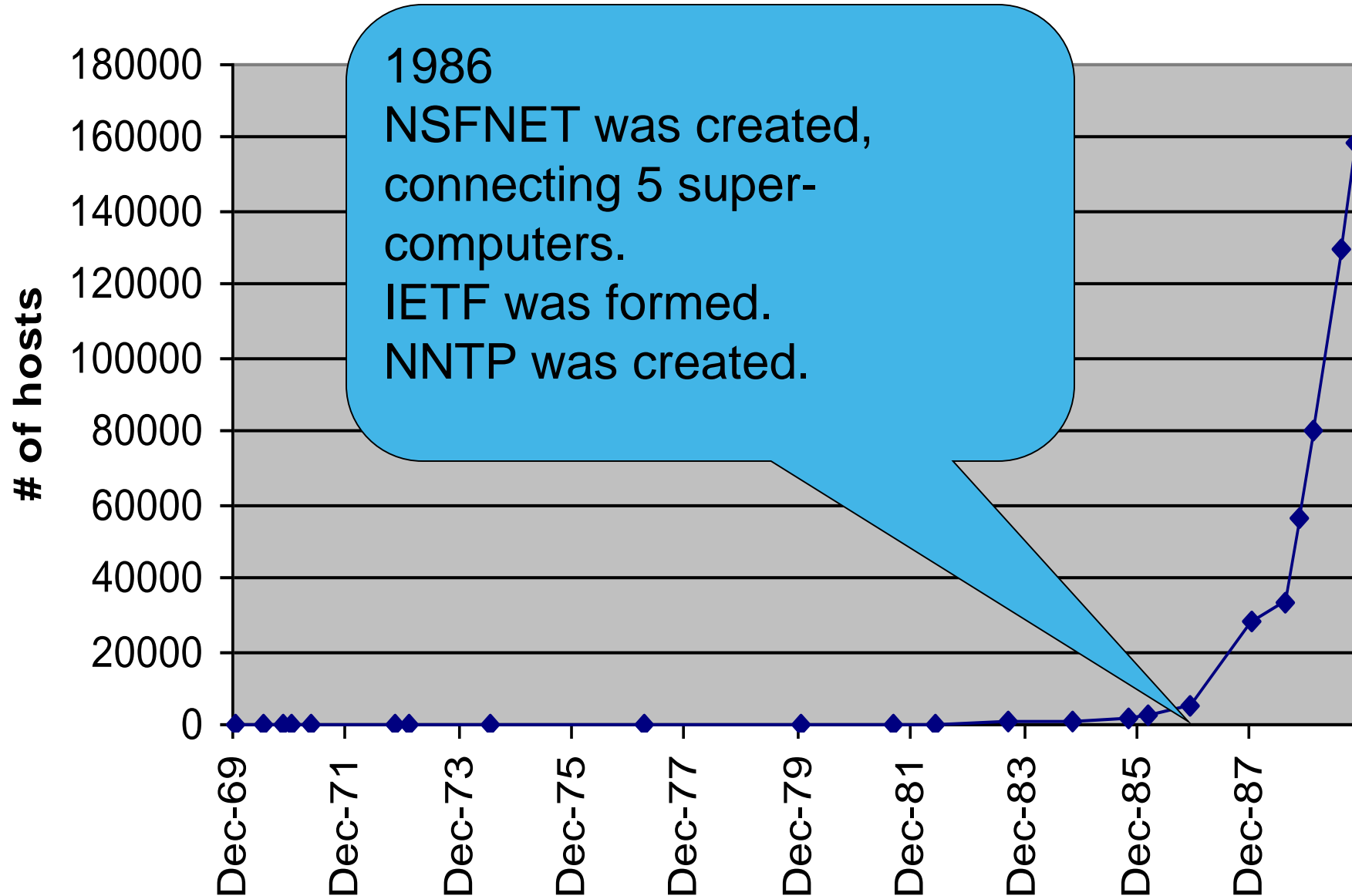
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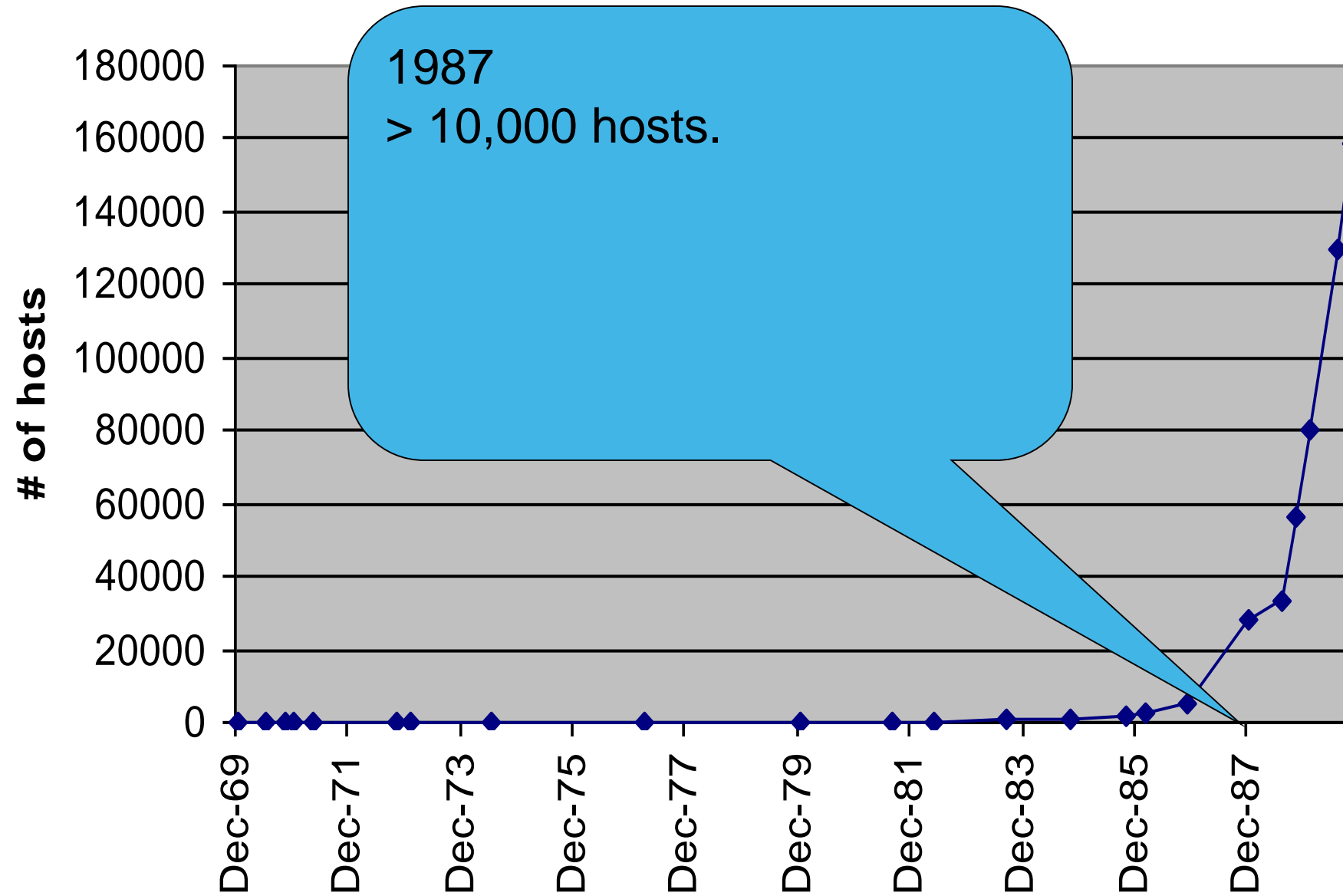
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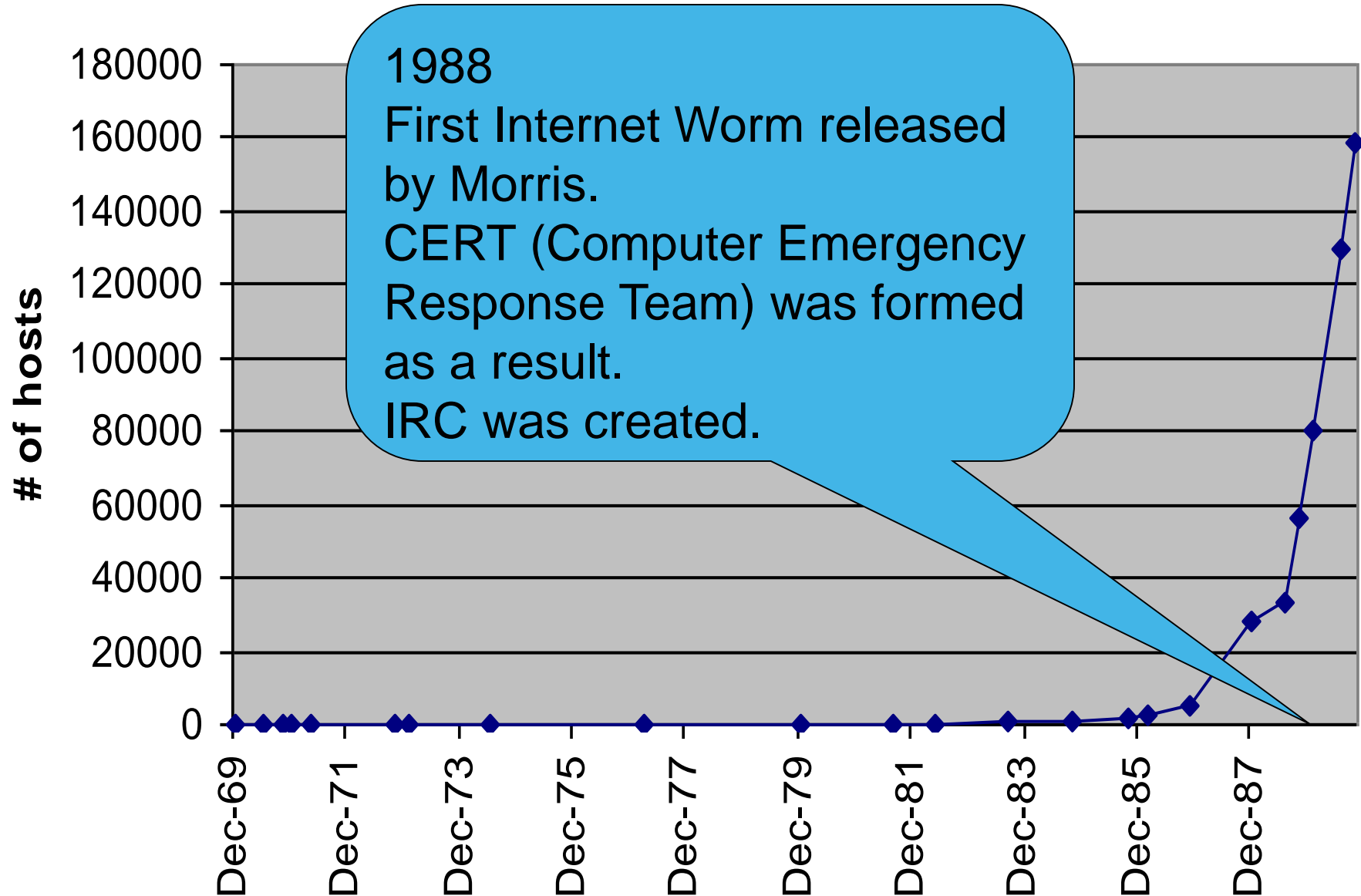
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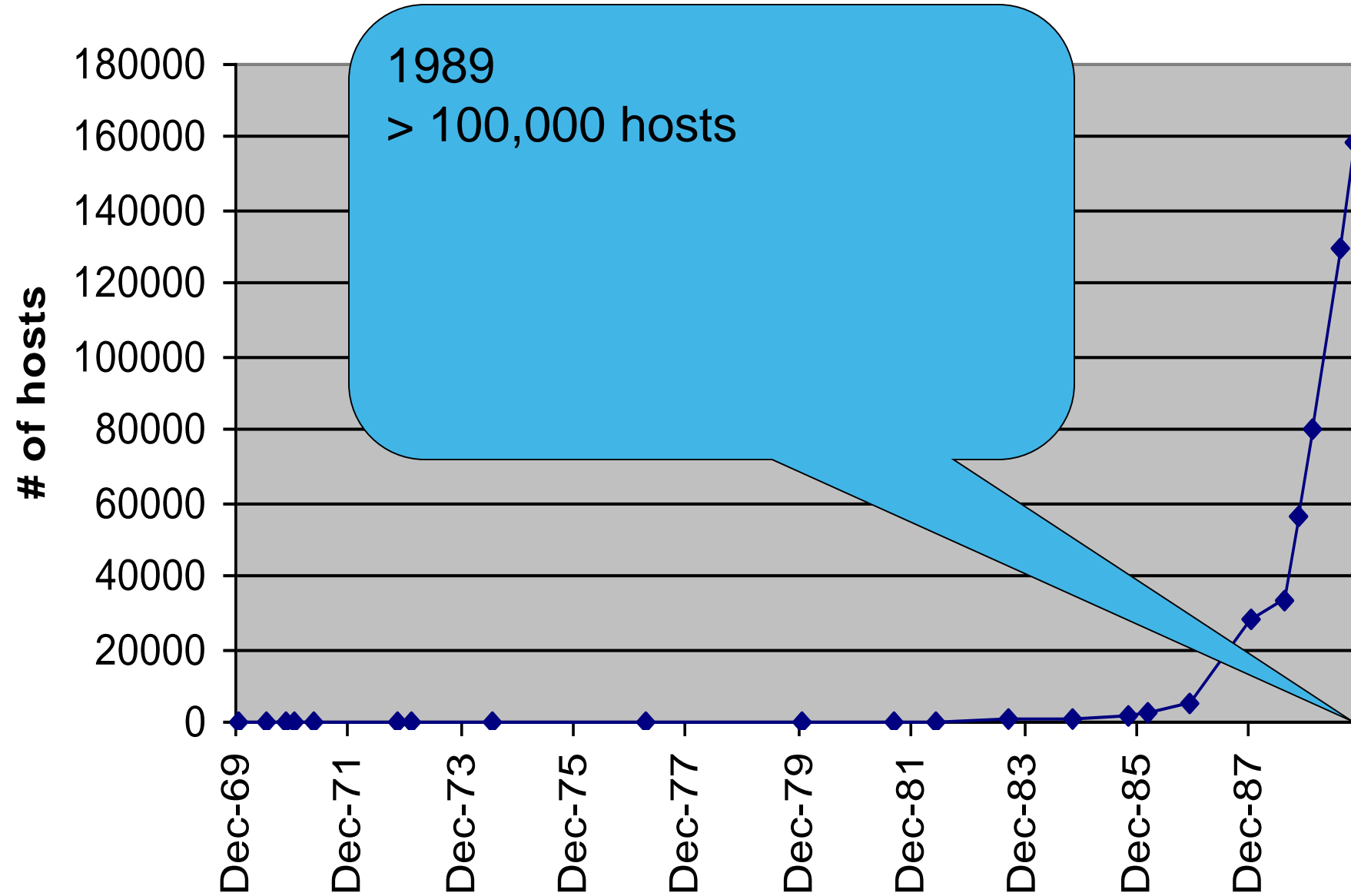
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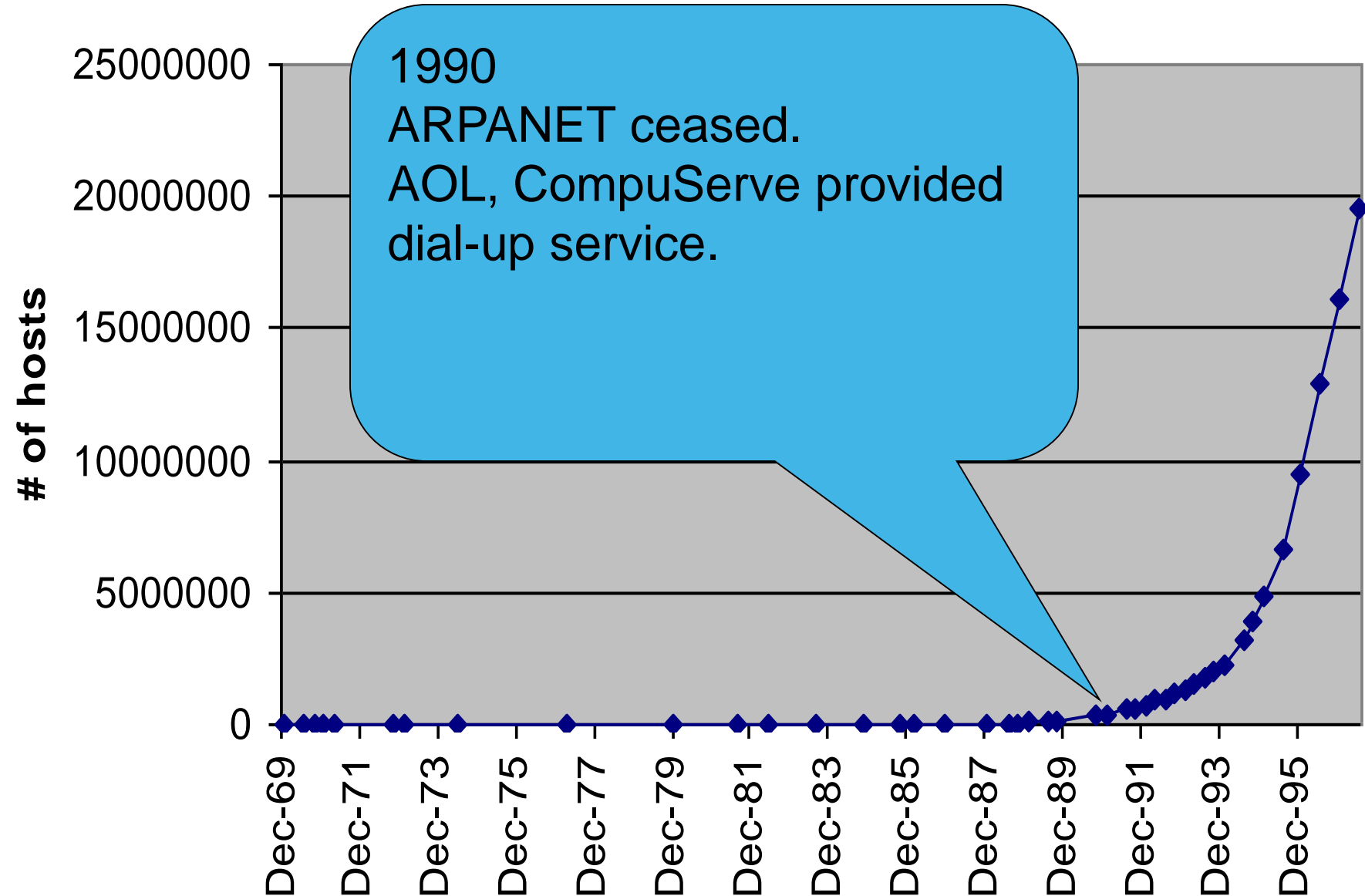
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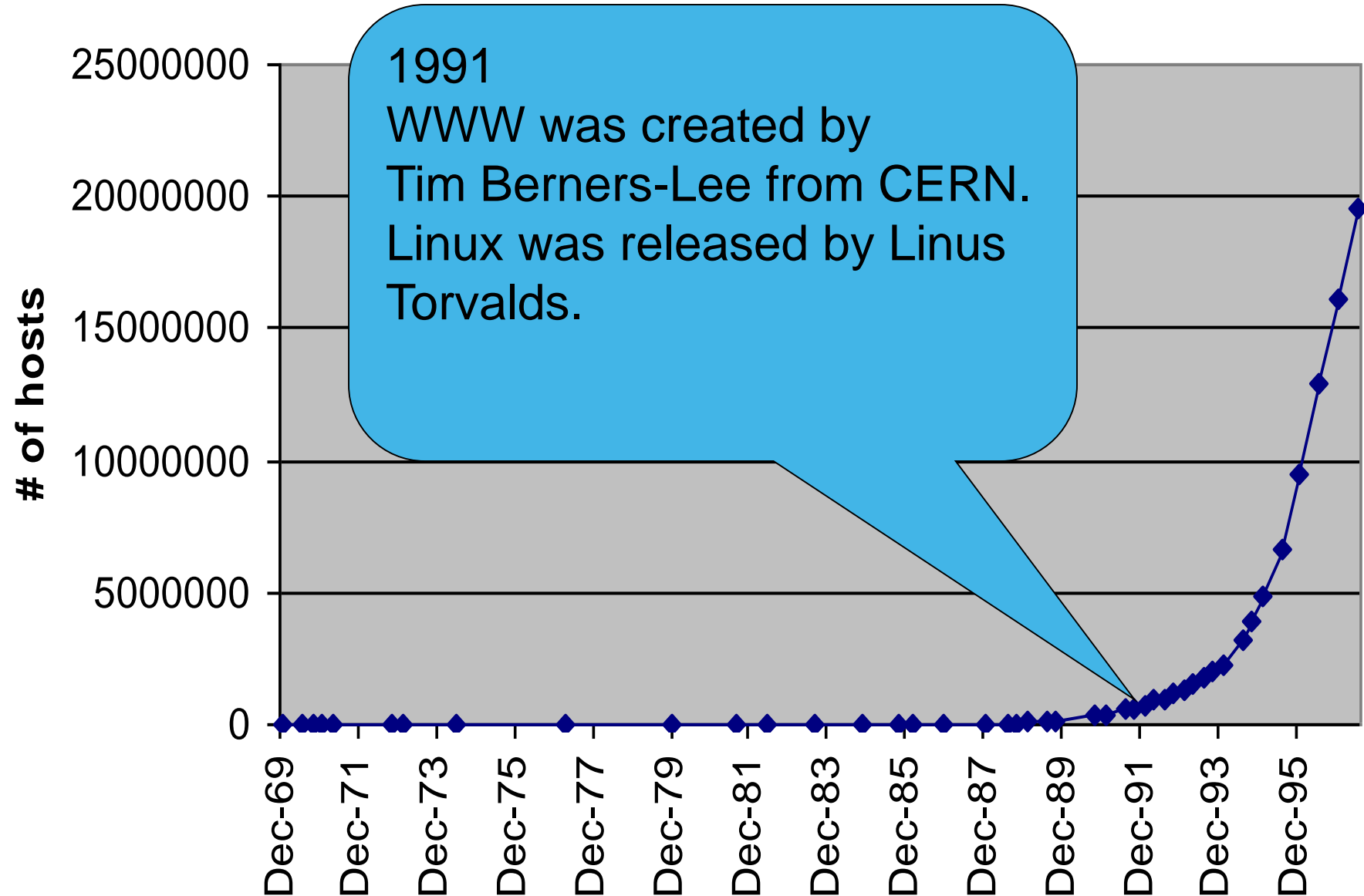
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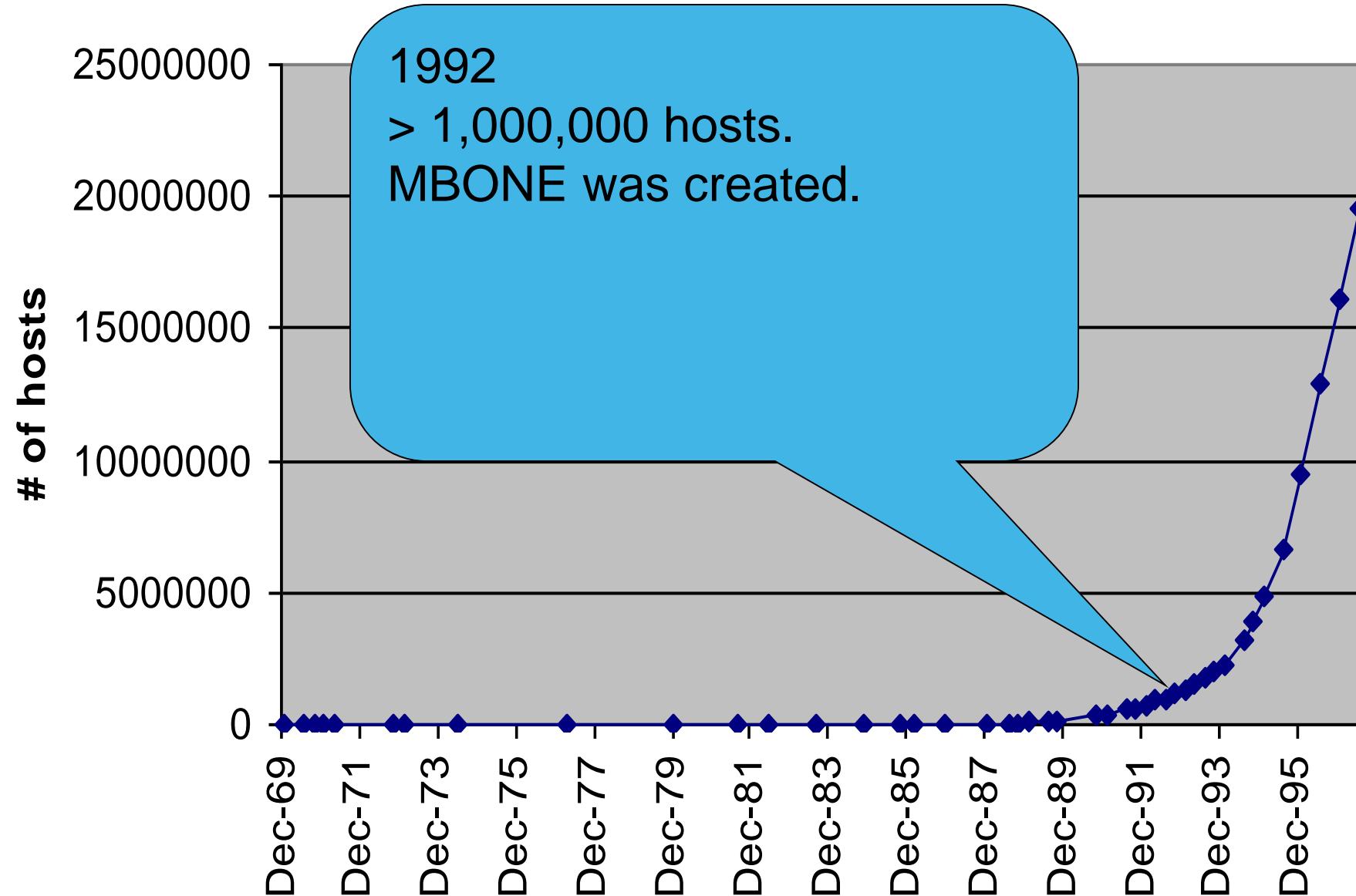
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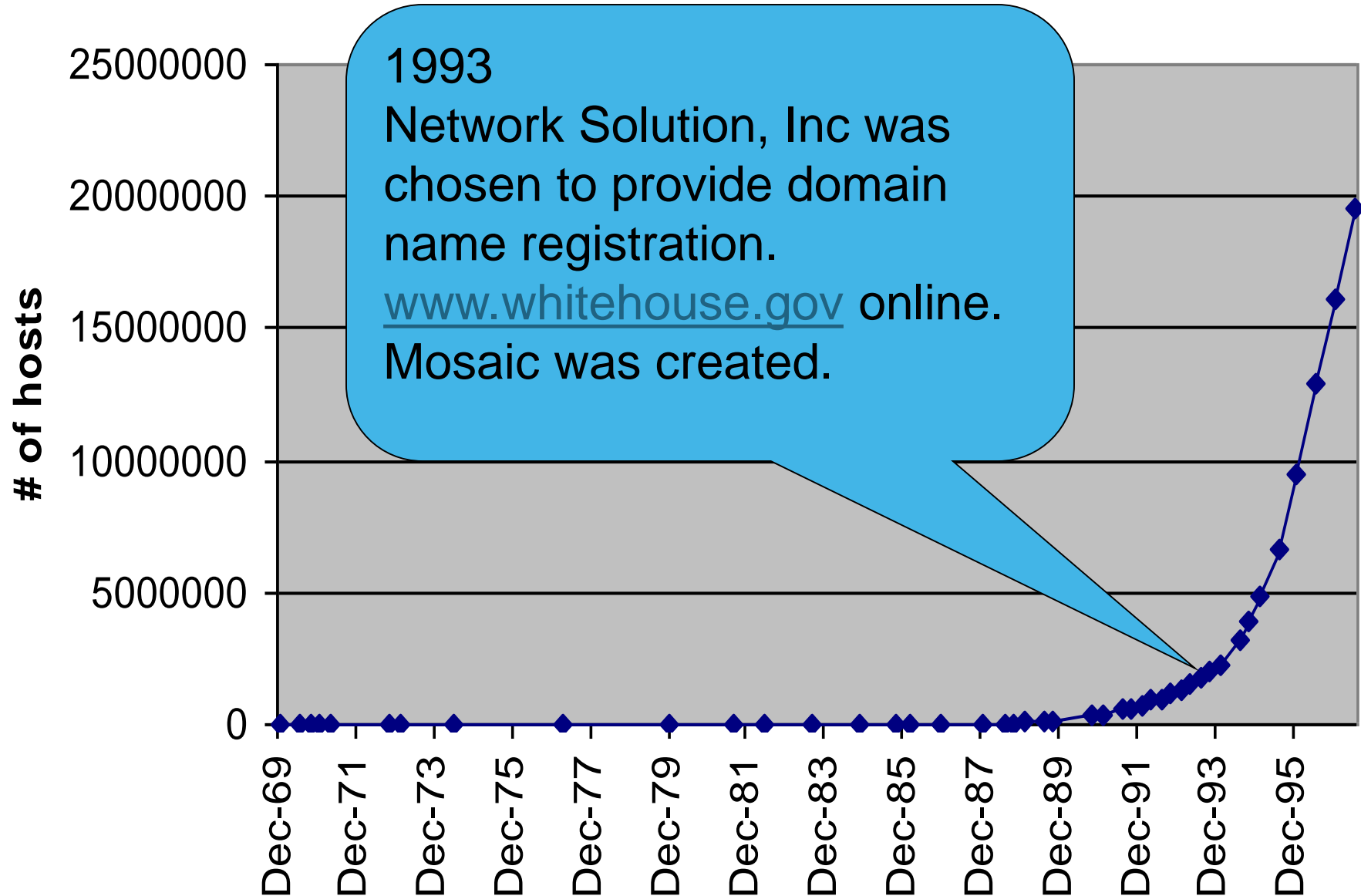
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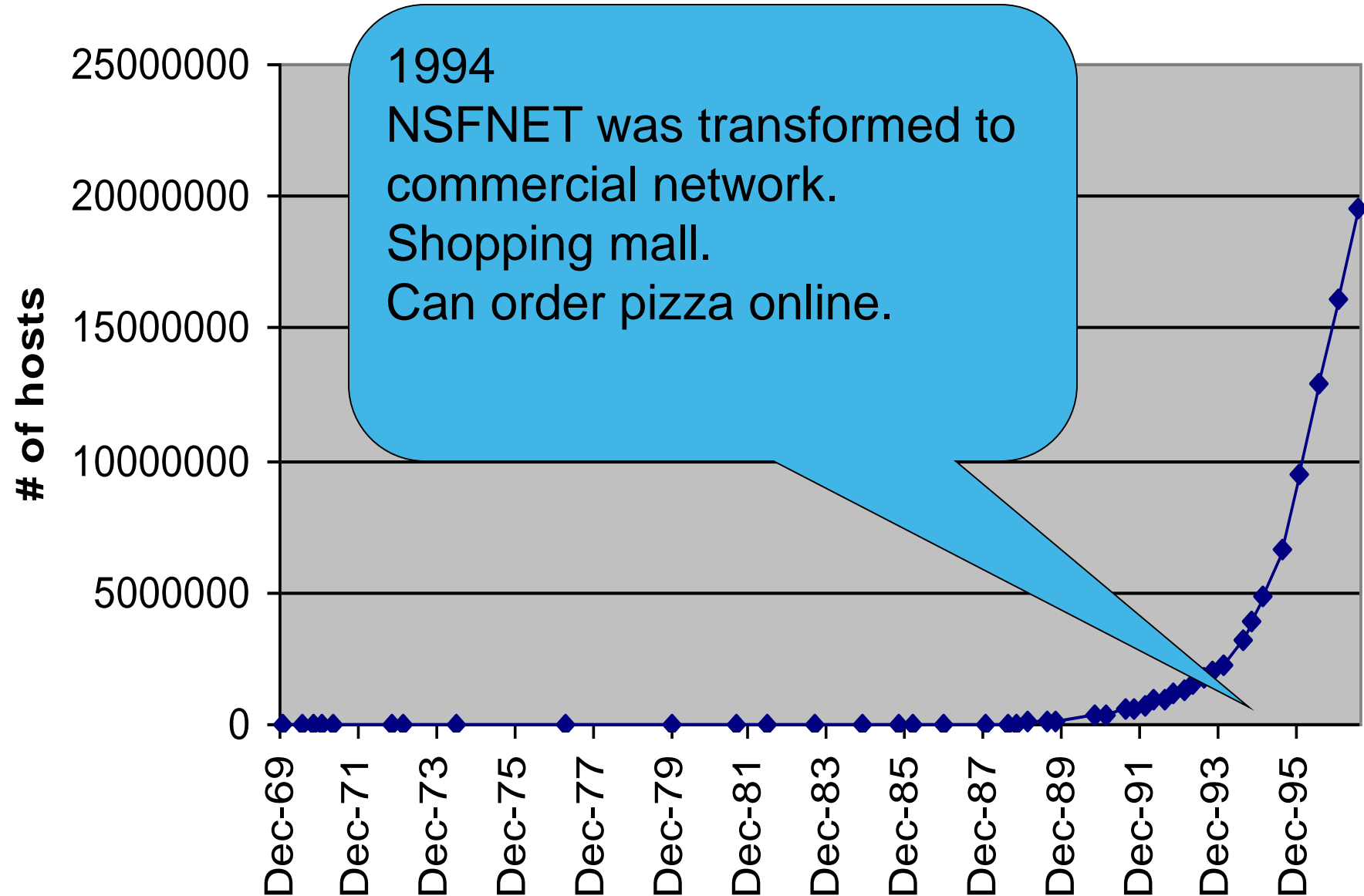
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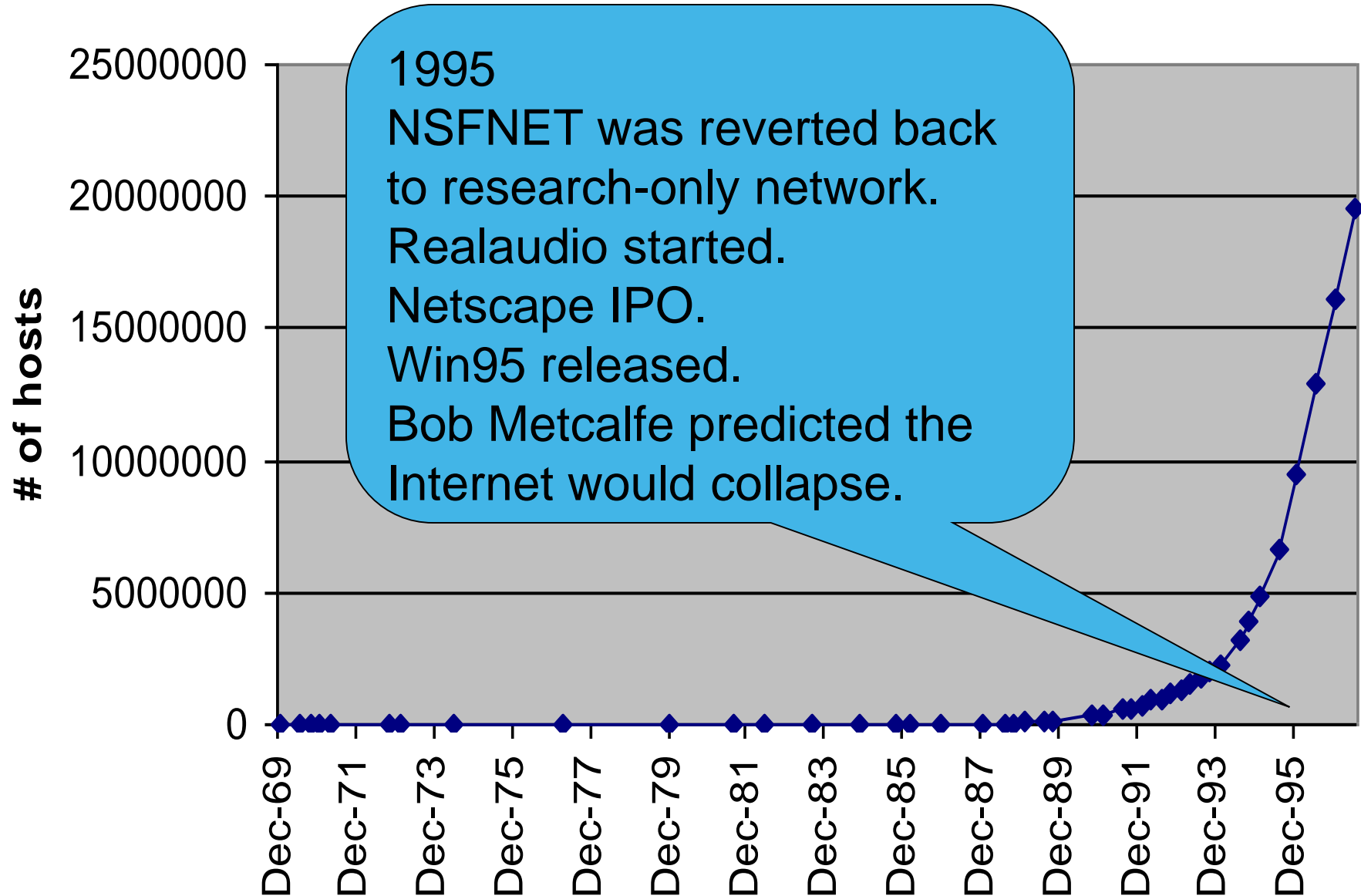
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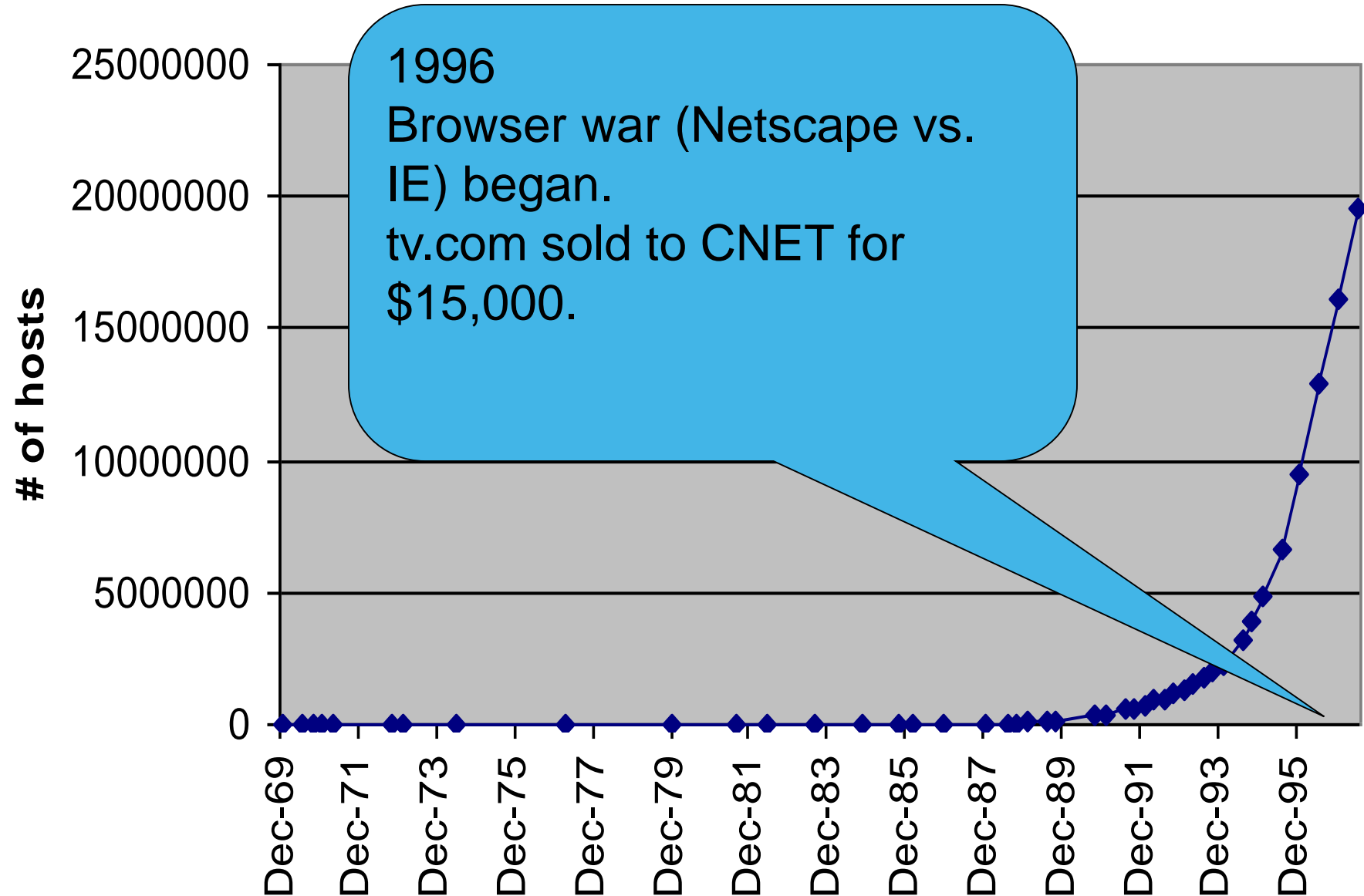
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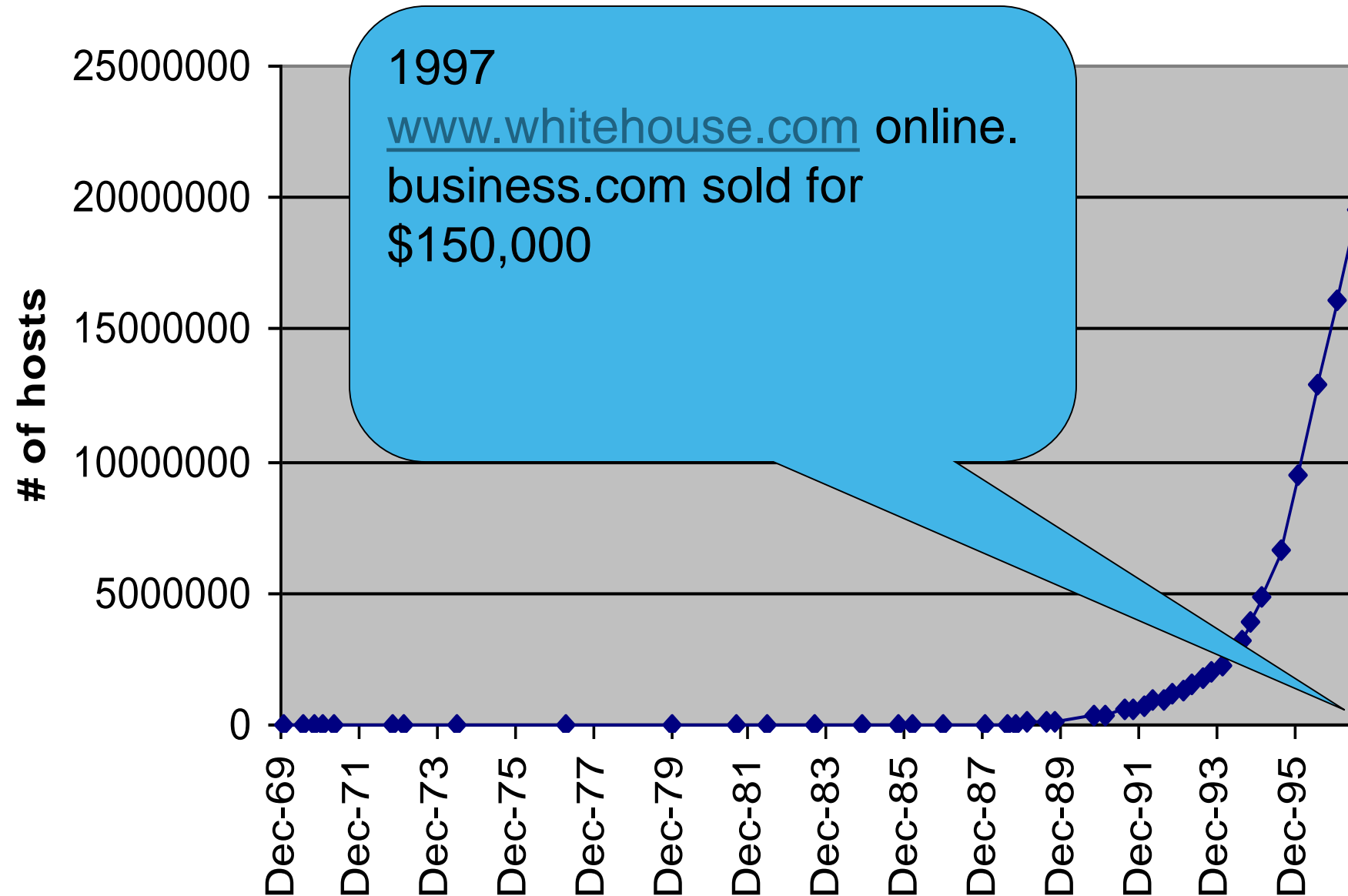
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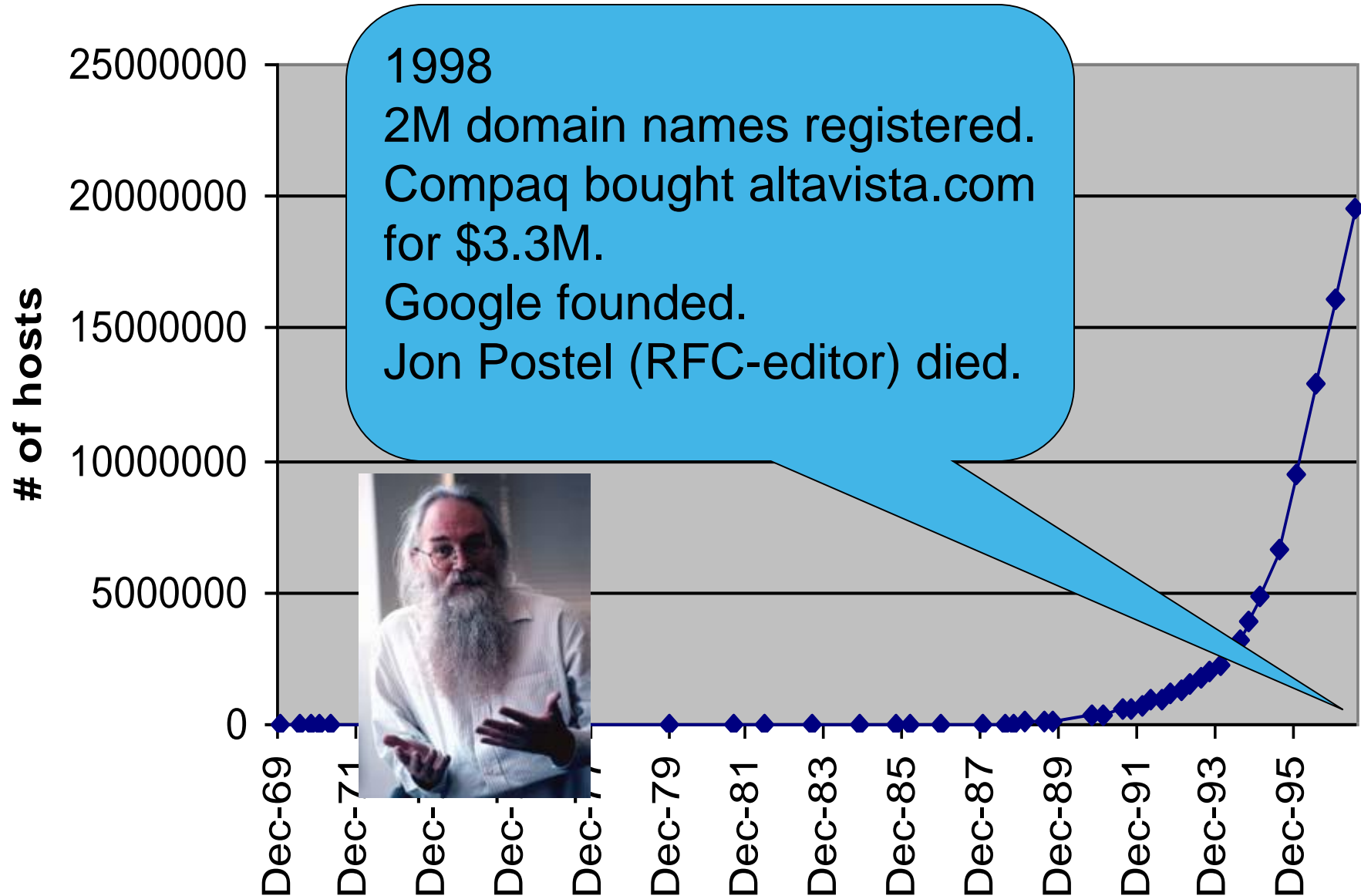
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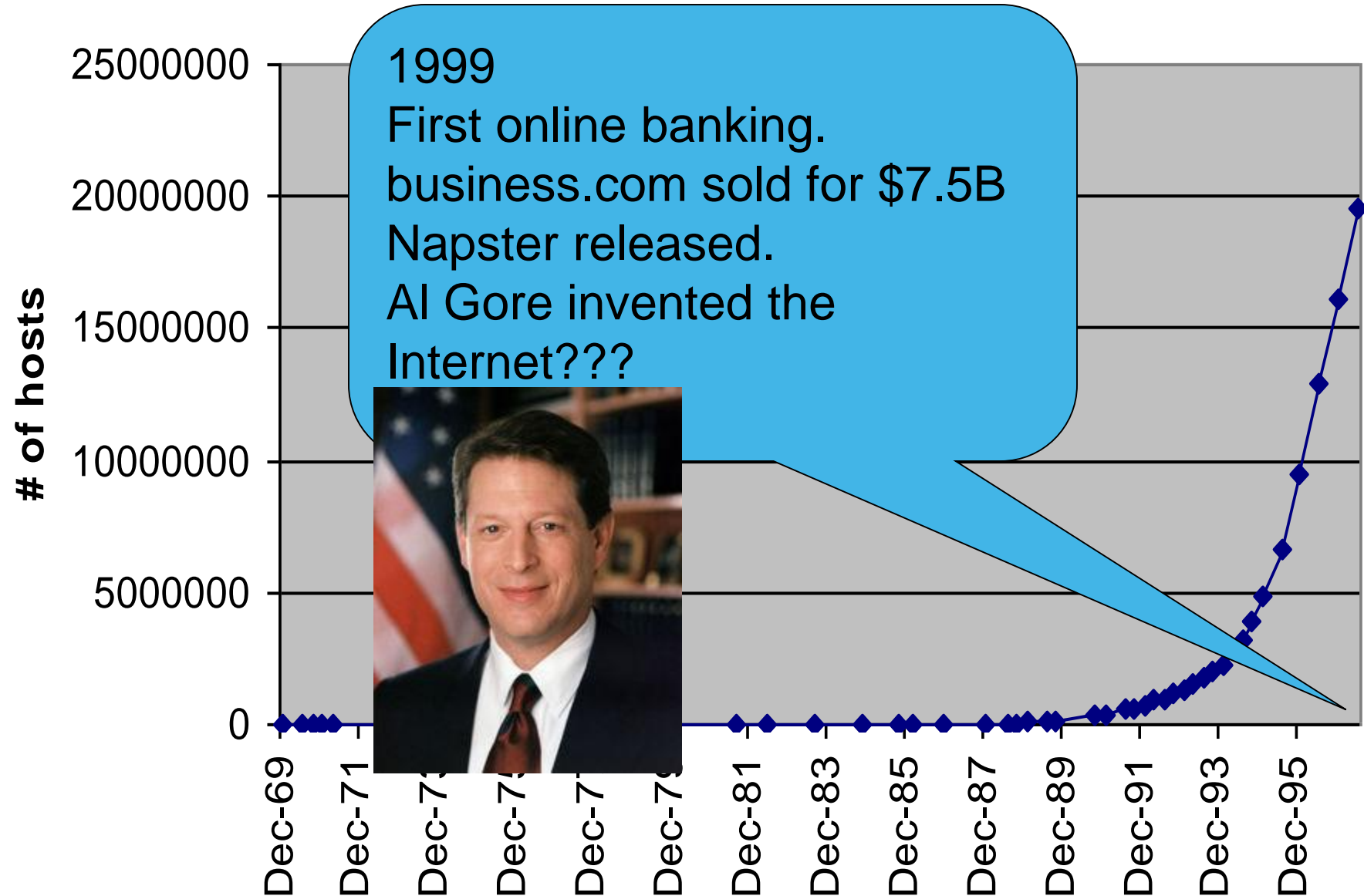
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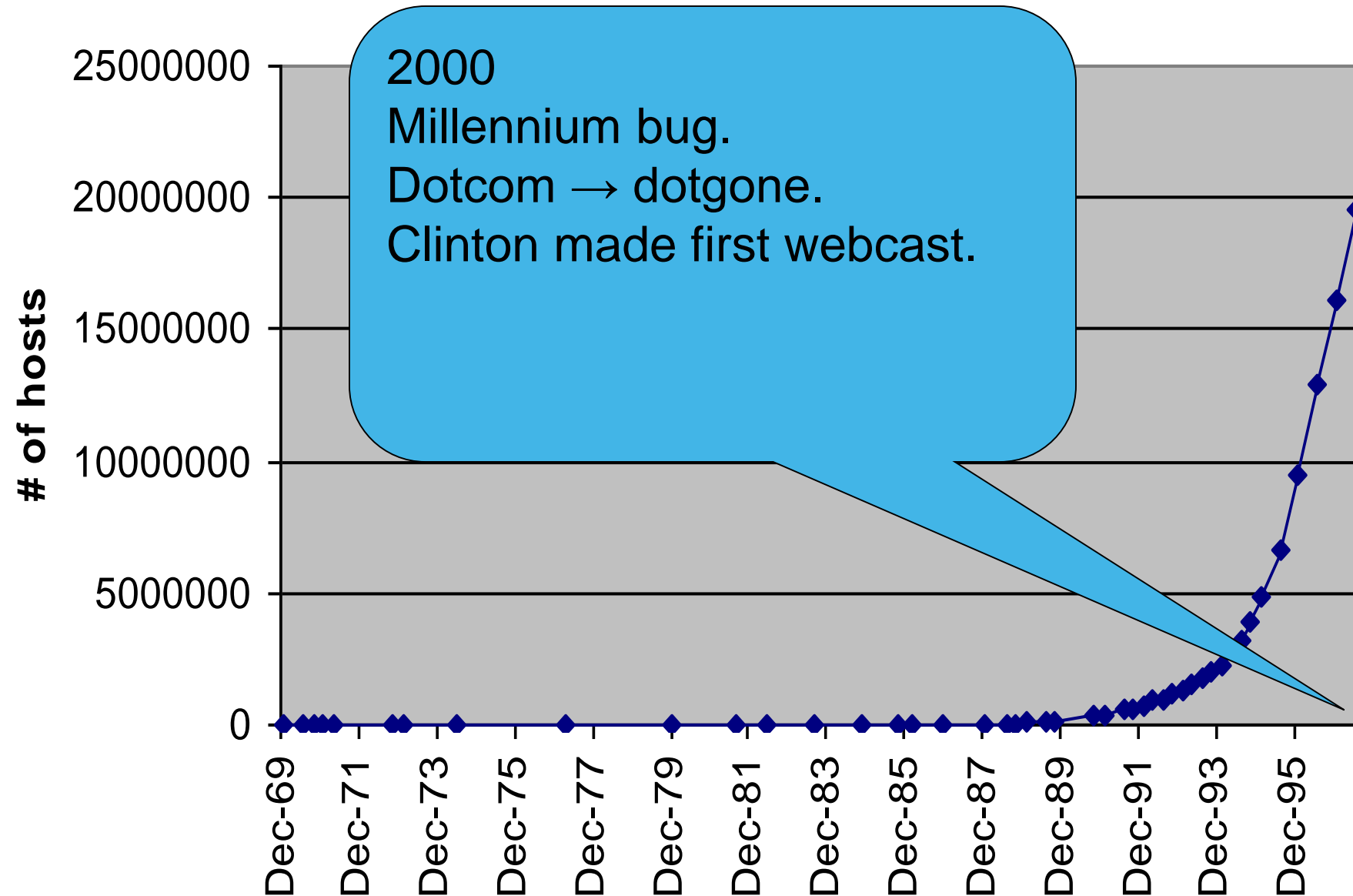
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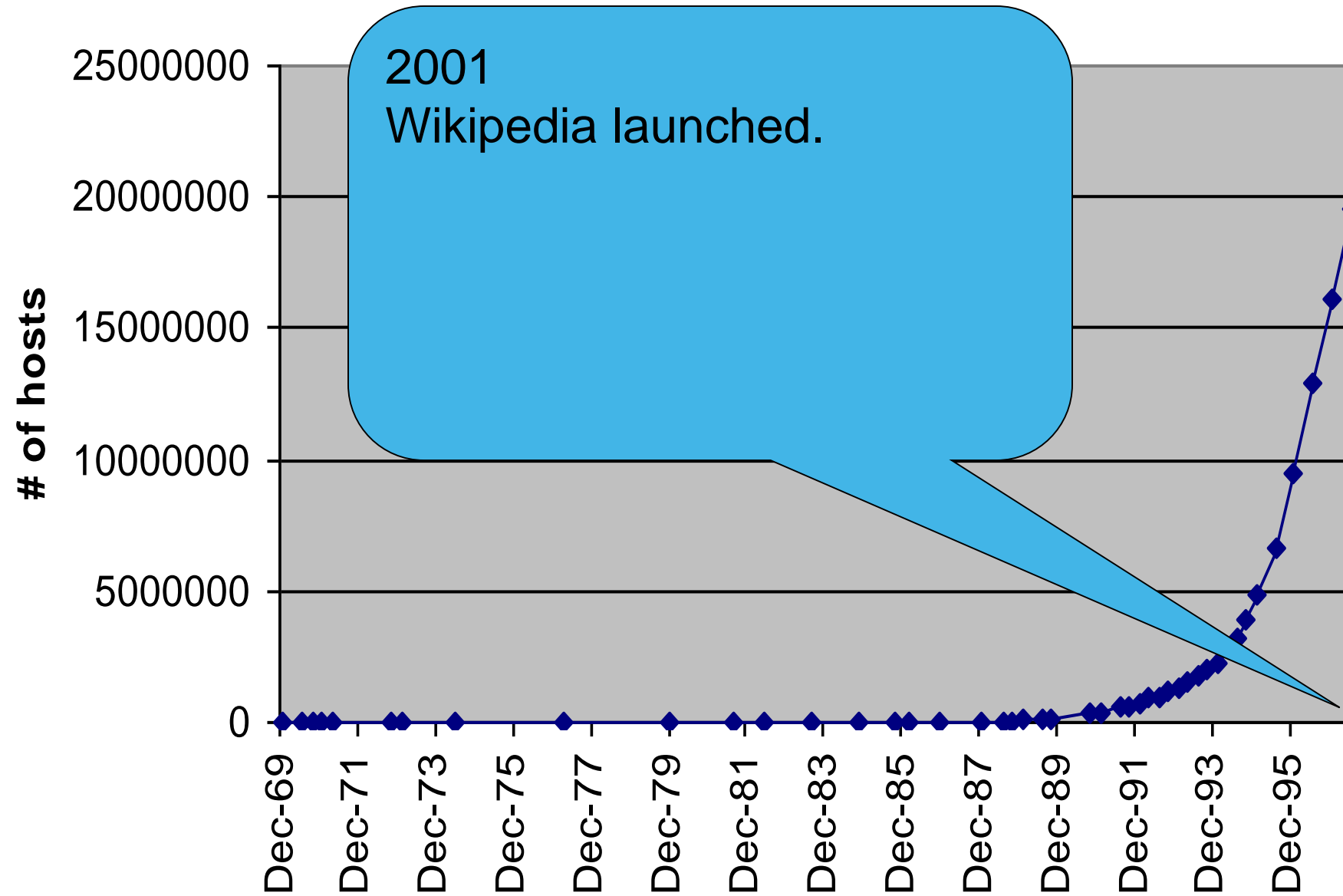
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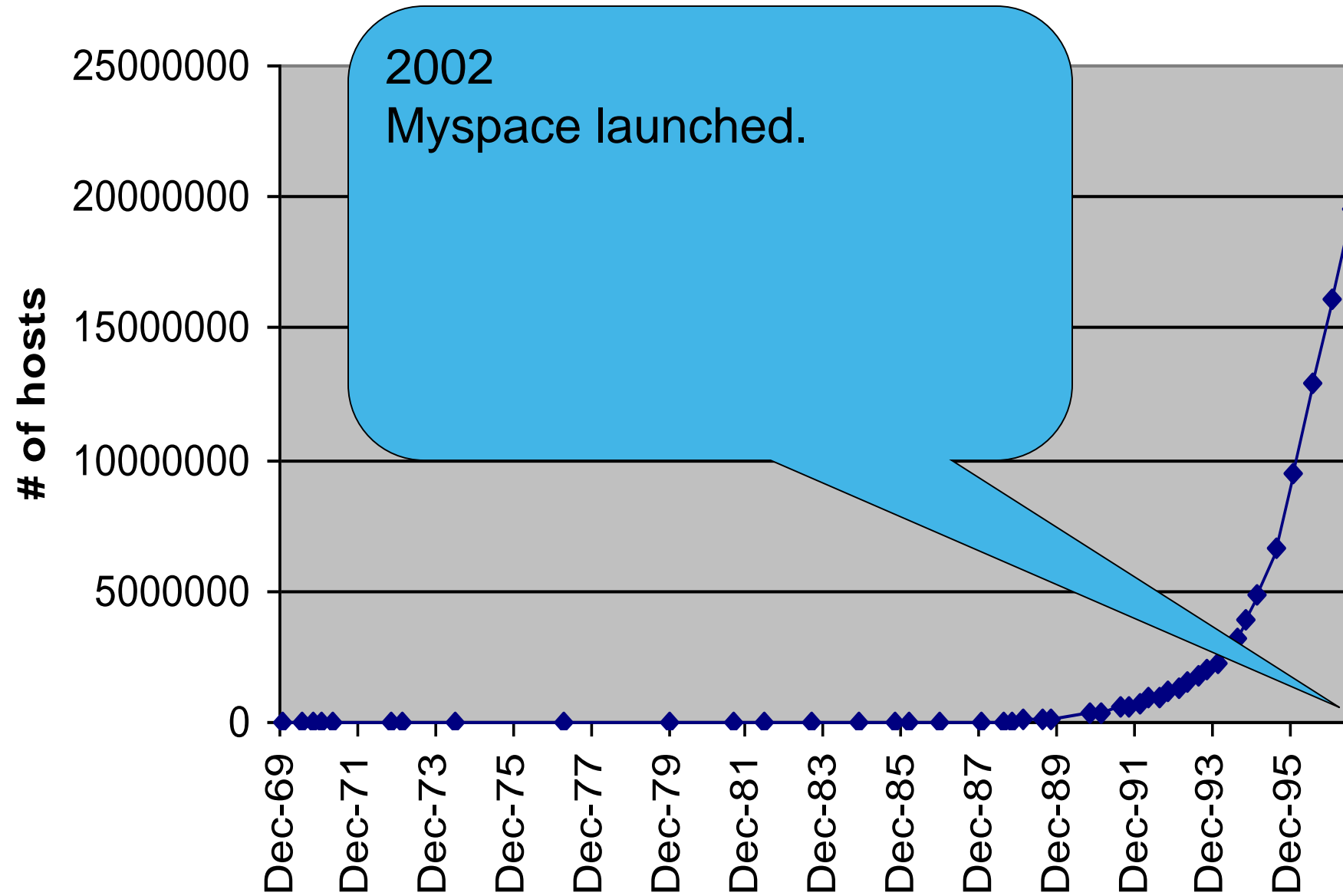
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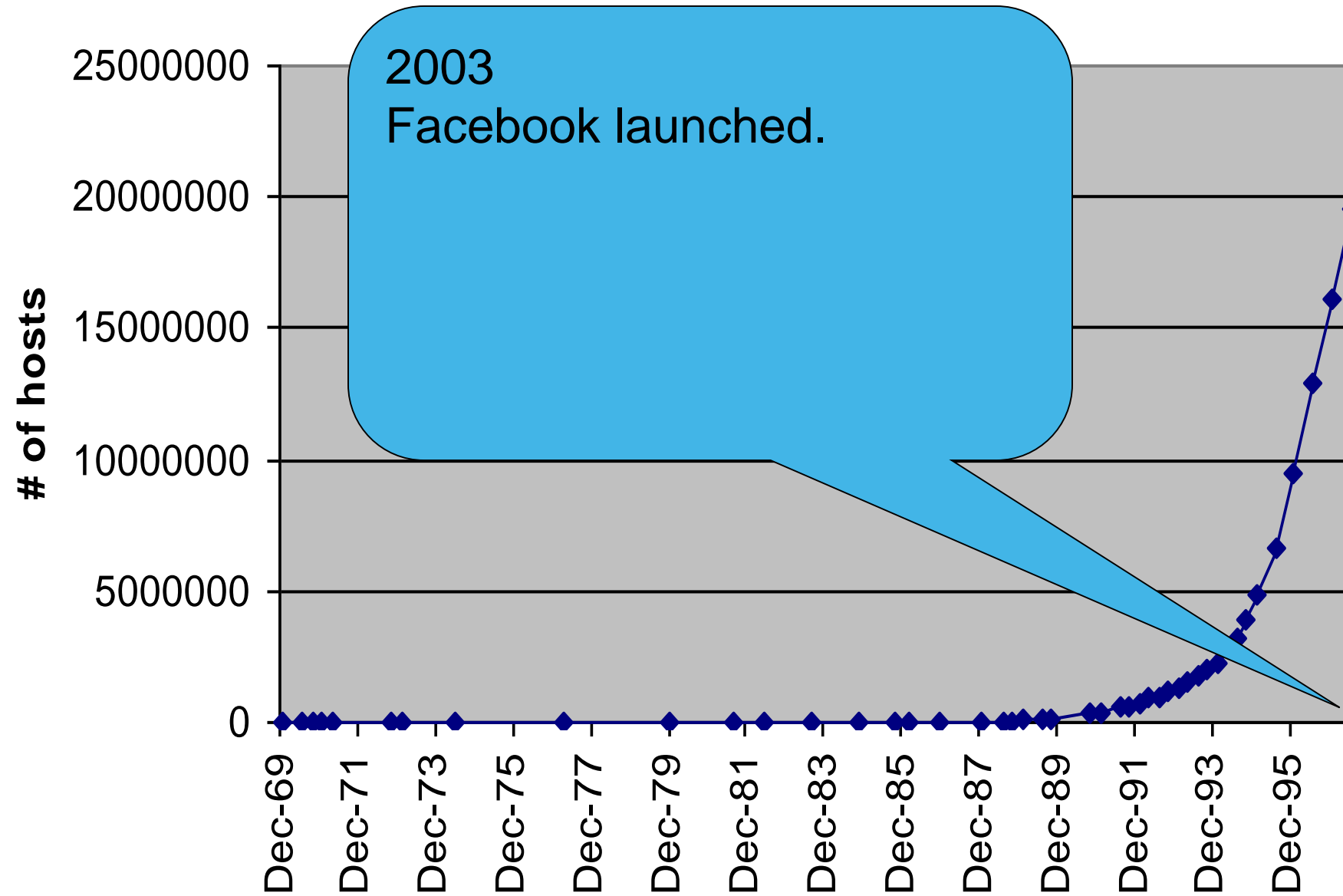
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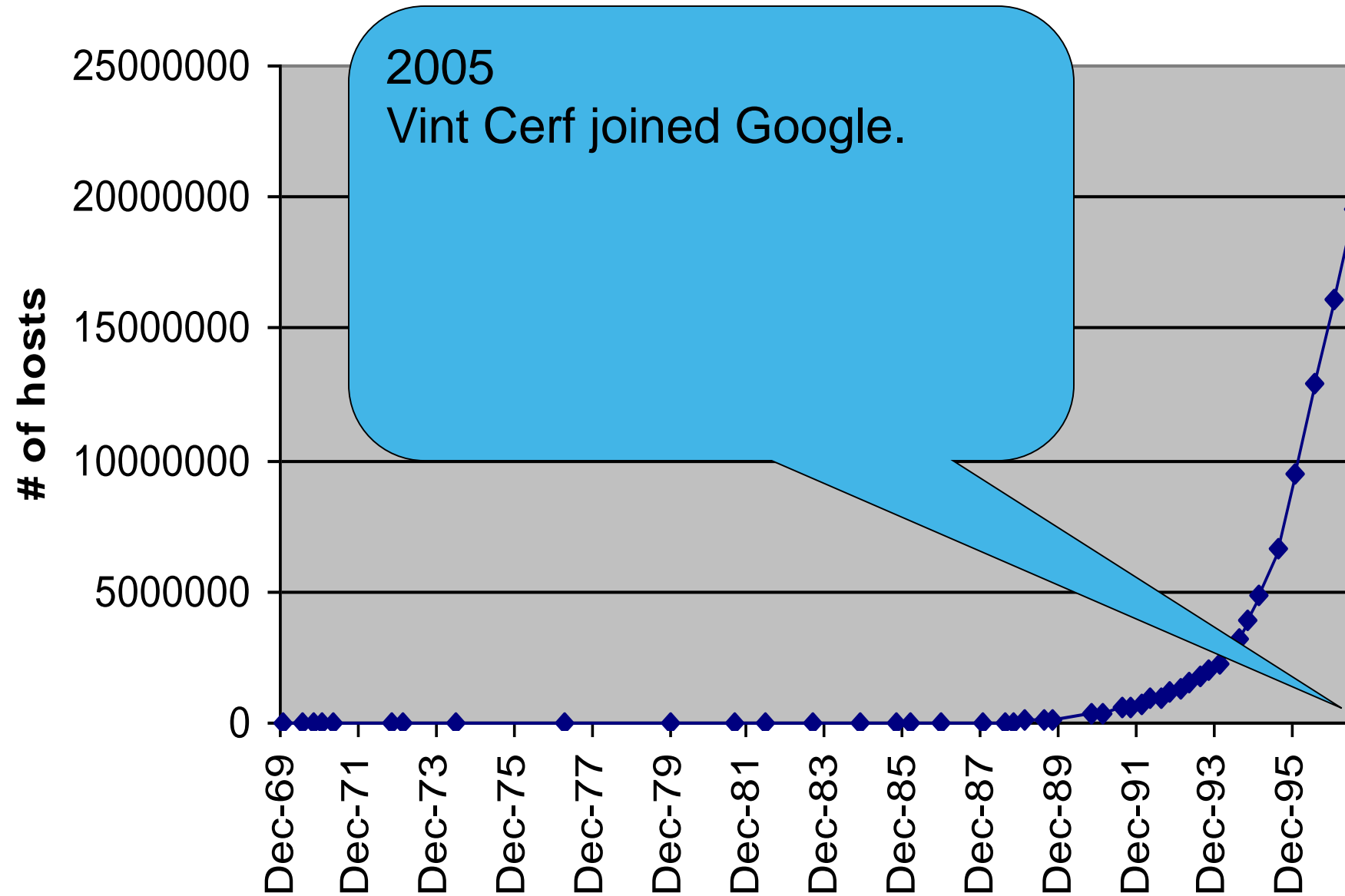
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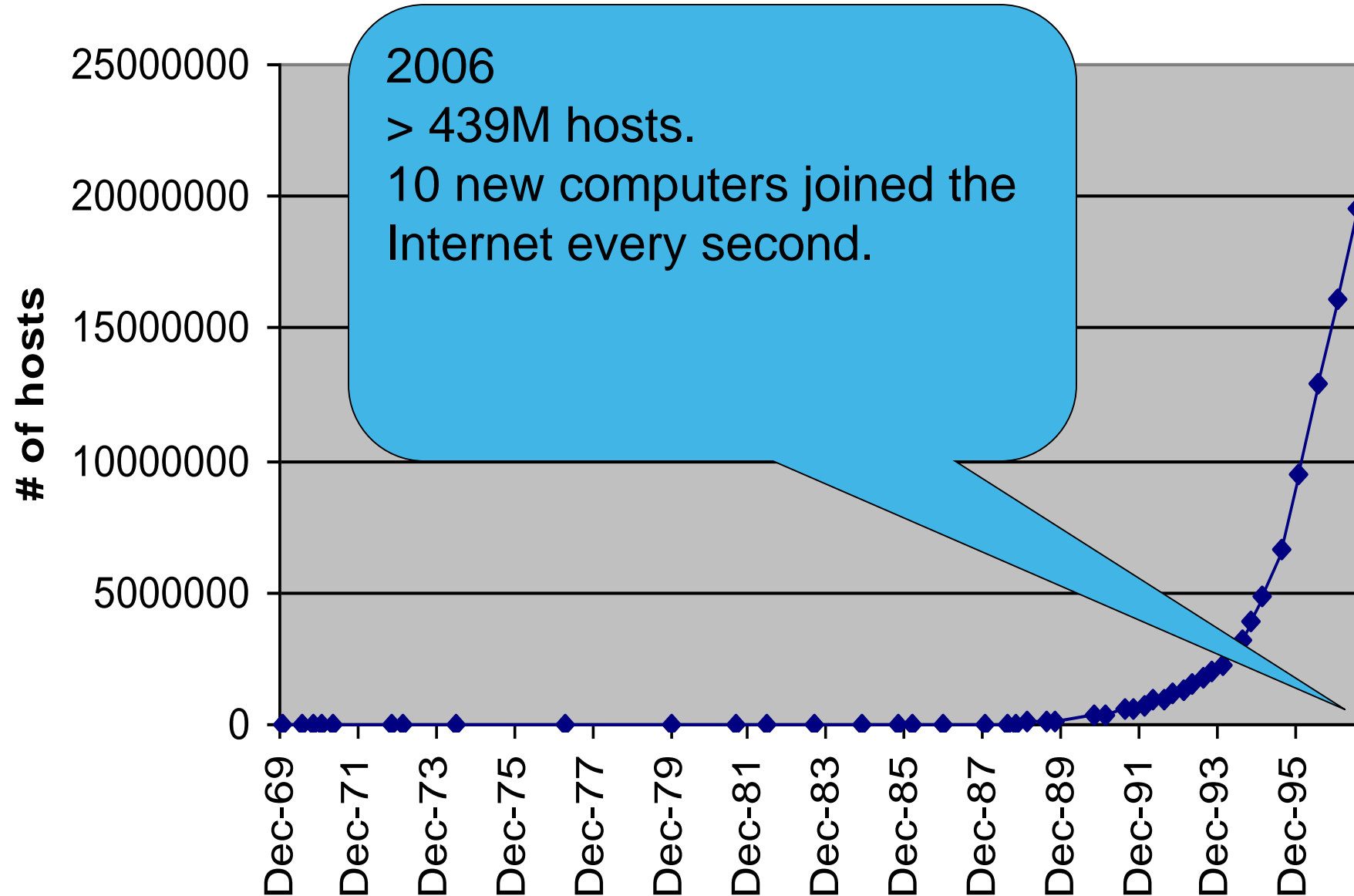
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Questions?

