

# DNS, Identity, and Internet Naming for Experimentation and Research (DIINER)

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# Overview

- Challenges in today's DNS research
- Our solution to battle ossification
- Architectural overview of DIINER
- Plans and Timeline

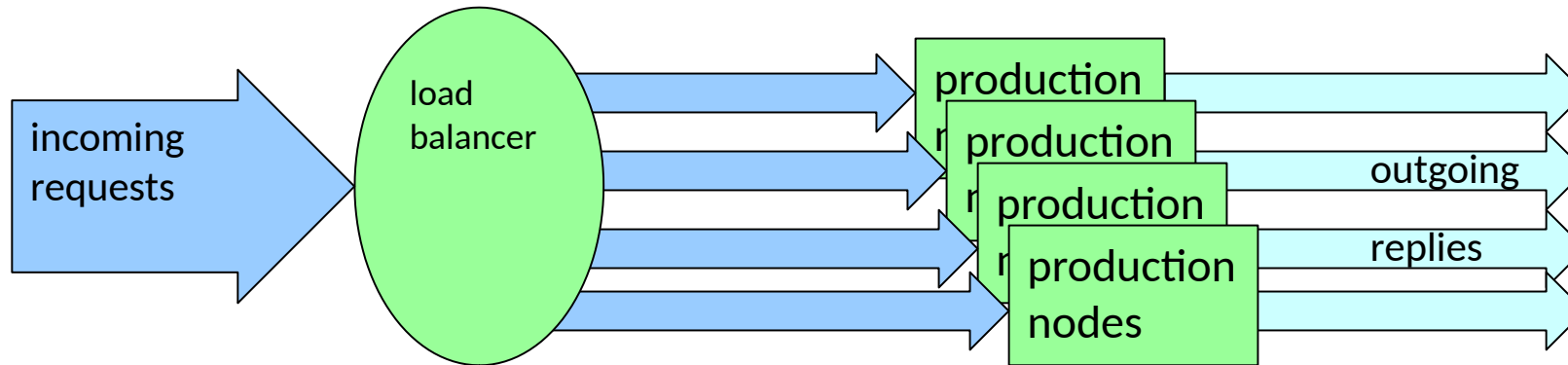
# Purpose Behind DIINER

- Originally, DNS was an experimental replacement to static hosts
- Now, the world's economy relies on its “perfect” performance
- This makes innovation in **naming and identification** difficult
- Academic research relegated to studying without modification
- “DNS 2.0 will never happen”

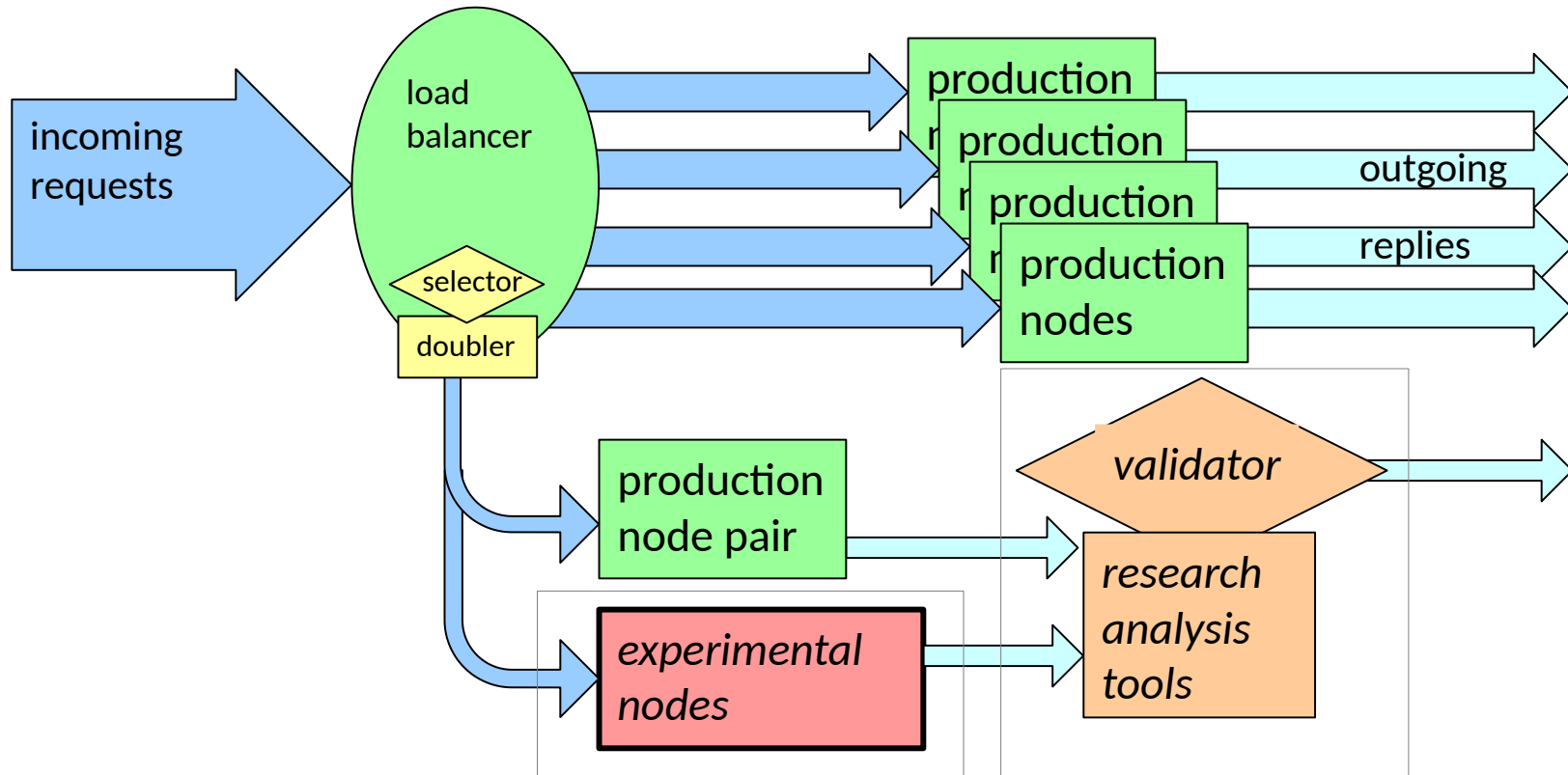
# DIINER

- 3 year, NSF funded research project
- Create academically accessible, collaborative infrastructure
- Draw naming and identification researchers
- Enable testing of new research in an operationally safe manner
- Safe and privacy protected data sharing of operational DNS data
- Building on B-Root, Resolvers and Authoritative servers

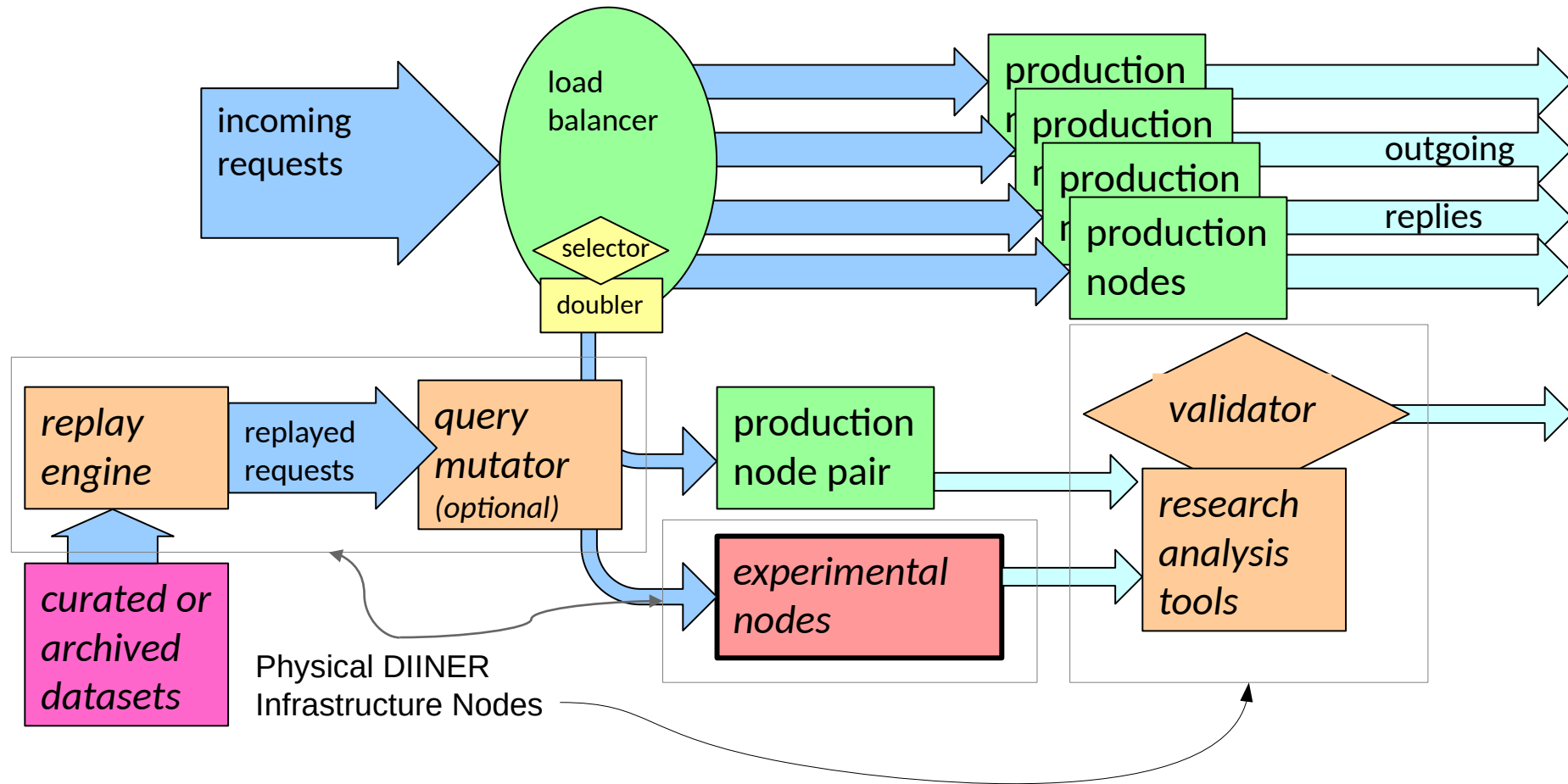
# B-Root (and others) today



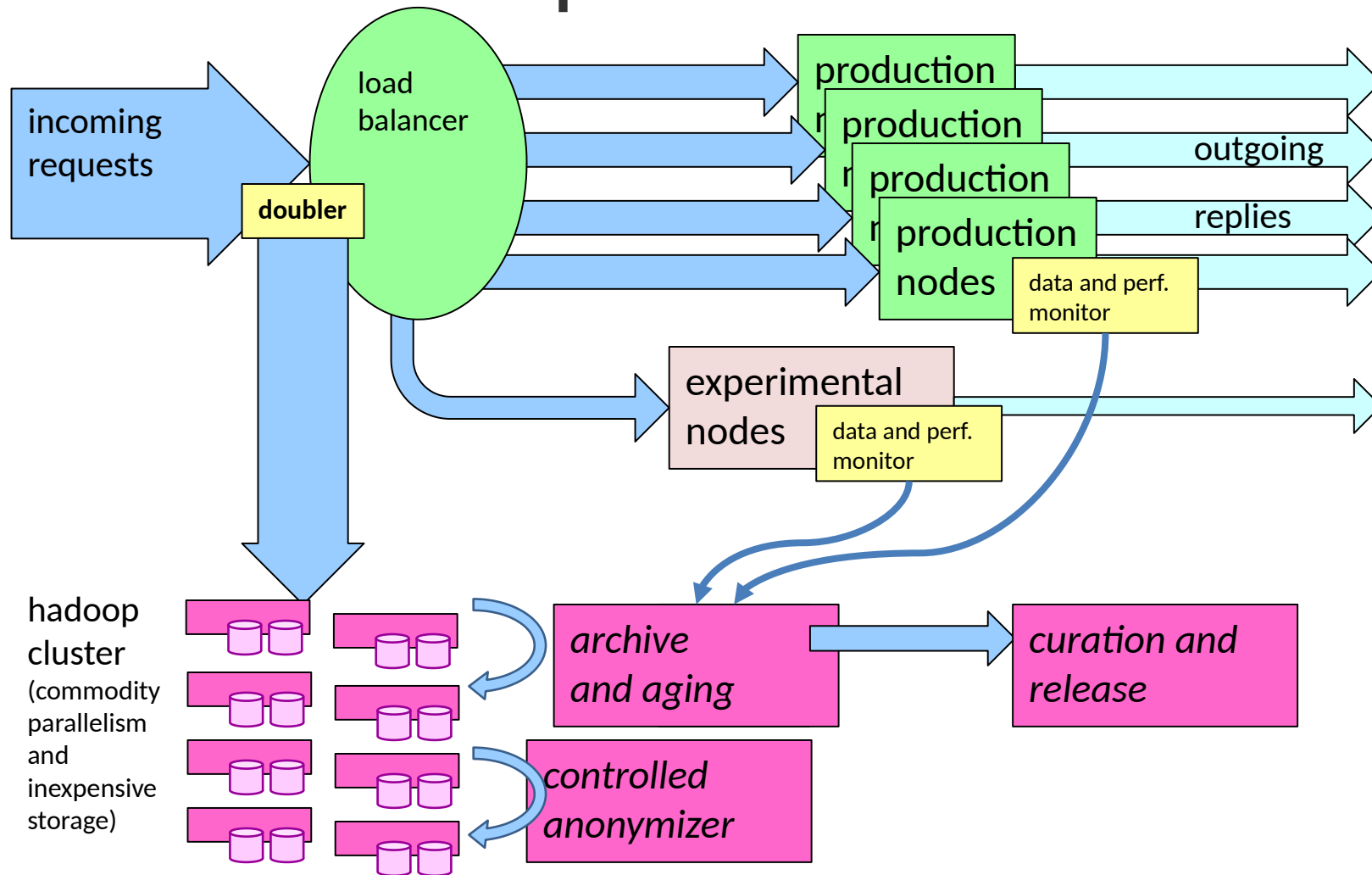
# Adding in DIINER parallel infrastructure



# DIINER repeatability infrastructure



# DIINER Data Capture and Curation





# Plans and Timeline

- Near-term:
  - Clone a B-Root production stream as a parallel test system
  - Hold a workshop to discuss future needs and plans
- Longer-term:
  - Build an anycast system allowing the use of recursives and other auth servers
  - Build a web portal for project management
  - Build a result accuracy comparative engine

# Questions

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