

Resource-efficient Composition of Network Security Applications

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MOTIVATION

- Multiple security policies need to be **composed**
- While managing security appliances (e.g., IDS, IPS, firewalls)
- Manual composition is impractical

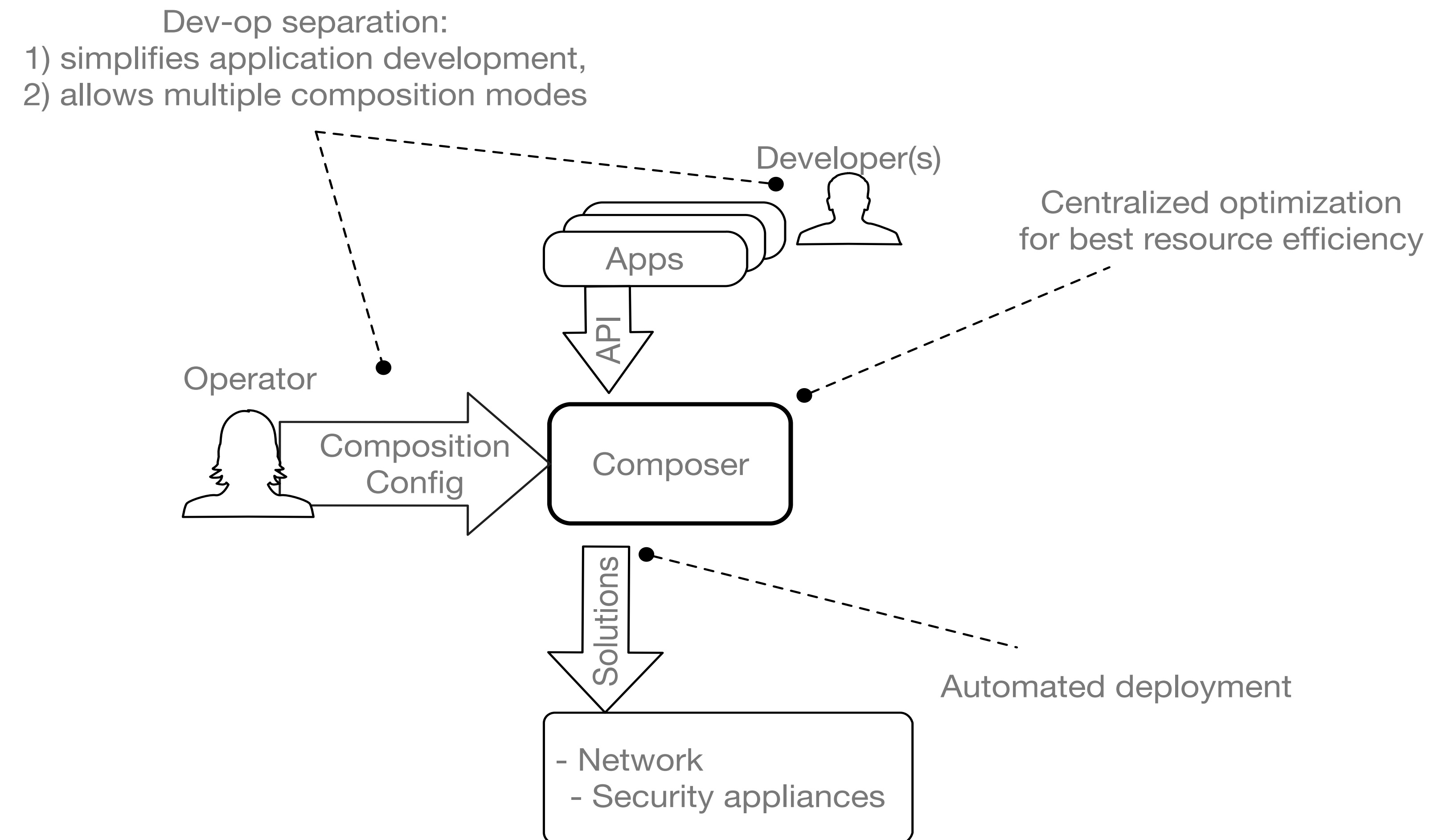
CHALLENGES

- Abstracting away composition and resource management from policy makers
- Responsiveness to policy and traffic changes

APPROACH

- Leverage Software-Defined Networking (SDN)
- Use a unified “language” for applications
- Optimize resource utilization within routes allowed by policies

DESIGN



RESULTS

- Applicable to security and networking applications
- **Improved** resource utilization by **up to 12%**
- **Responsive** to configuration and traffic changes (seconds)