# Quad Chart for: Enhancing Science Through Custom Paths For Trusted Users

Challenge:

Provide the ability for pre-authorized, trusted users to create flows that bypass middleboxes, thereby enabling those users to achieve substantially better performance while maintaining security and policy compliance for other network traffic.

Solution:

- Install SDN-enabled routers/switches in the campus network.

- Create two paths to the campus edge.

- By default, forward all packets through the existing campus core and policy-enforcing middleboxes.

- Develop a VIP Lanes server to dynamically install SDN rules (with higher priority) to "pick off" approved flows and forward them directly to the campus edge, by-passing middleboxes.

OpenFlow Controller

Default Code   User-Defined Code
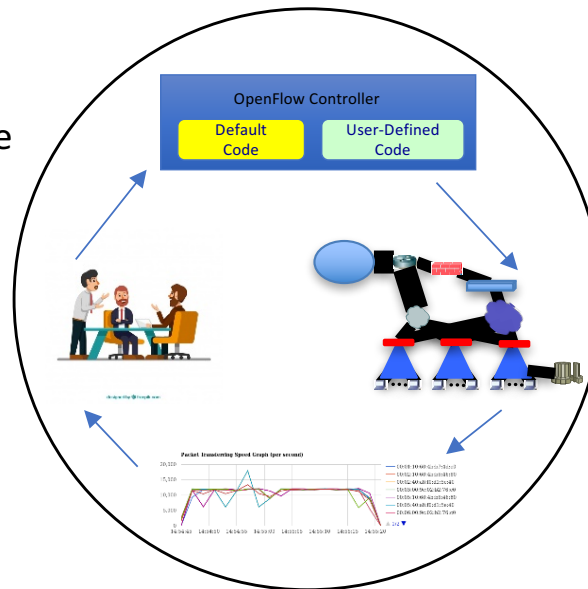
Value proposition:

- Provide better performance for data transfer to big data researchers while still maintaining security and policy compliance for other traffic.

- Deploy SDN on campus networks.

- Presents an opportunity for users and providers to work together to develop solutions that enable explicit negotiation that can lead to trust

What we need to TTP

- Your feedback

- Learn from experience of other projects

- Opportunities to collaborate with researchers and IT from other universities

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