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Advance reservation access control using software-defined networking and tokens

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Highlights

- A system that automates the advance reservation provisioning process using multidomain SDN orchestration.
- A system that uses tokens to strongly bind an end-to-end flow to the user or application that requested the reservation.
- The system was deployed in the ESNet testbed.
- The system can reduce the provisioning time of an end-to-end circuit from several days (manual process) to a few minutes (automated process).
- A self-contained token approach replies from 15 ms to 1 second faster to a client requests than does an opaque token approach, because validation happens on the enforcement point.

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