MyExperiment – An Online Repository for PrimoGENI Experiments

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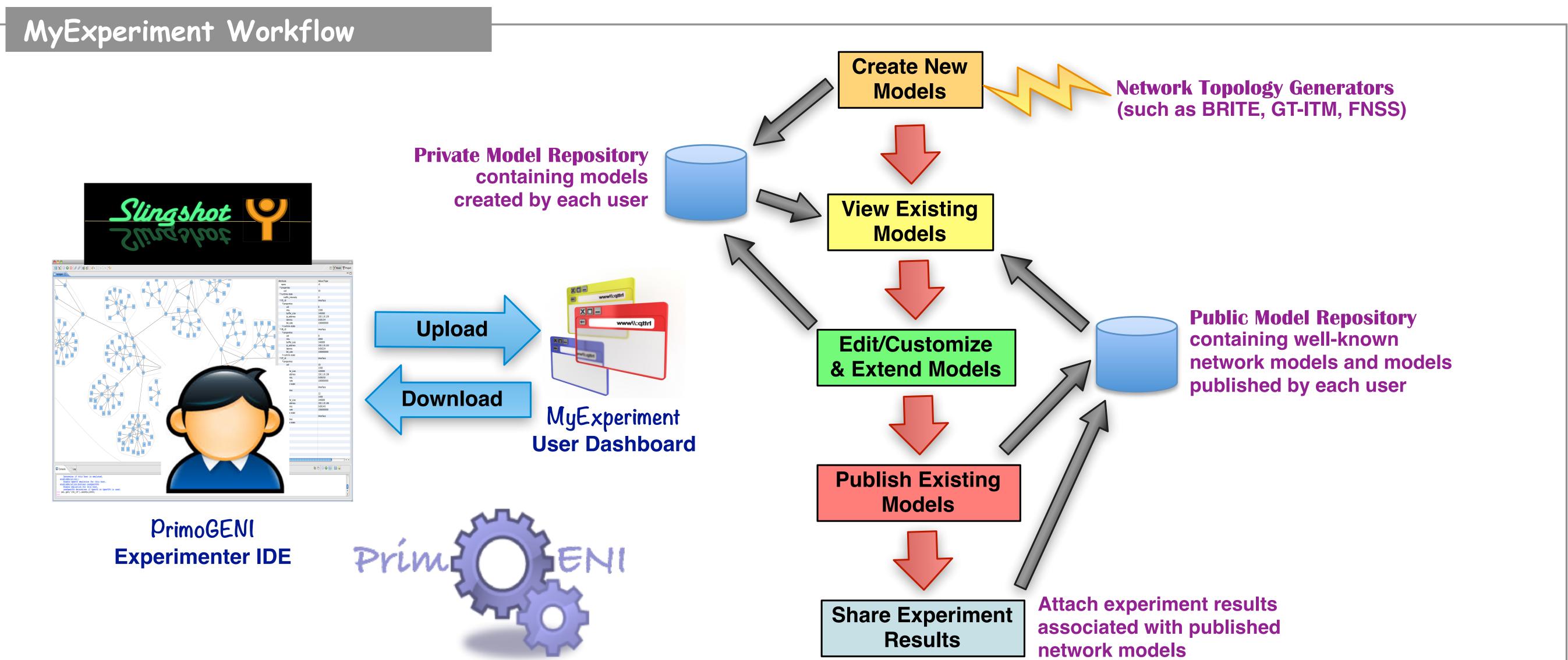
What's MyExperiment?

MyExperiment is a public repository of network models for PrimoGENI:

- PrimoGENI allows hybrid network experiments consisted of simulated and emulated network entities
- Each PrimoGENI experiment consists of a model of a virtual network, which includes the specification of the network topology with ulletdetailed configuration of network entities, and possible specification of background network traffic
- MyExperiment is an online repository, where experimenters can create, view, and modify network models; one can also publish \bullet network models and share experiment results with the user community
- MyExperiment contains plugins for various network topology and traffic generators (such as BRITE, GT-ITM, and FNSS); there are \bullet also existing network topologies (synthetic and real ones, such as RocketFuel ISP networks) and traffic matrices
- MyExperiment manages network models created by each user and supports translation between different formats \bullet
- Users can publish their models and share experiment results to facilitate model reuse and validation •

We present here only a prototype with partial implementation. A full version of MyExperiment is expected to

be released at GEC22 (March 2015). Please stay tuned!



System Design Overview

- MyExperiment system contains three major modules:
 - ✓ A web interface providing dynamic and feature-rich experience to GENI users for creating, managing, and sharing network models
 - ✓ A model creation system containing plugins for popular model generators (such as the Fast Network Simulation Setup or FNSS)
 - ✓ A database system for managing model repositories (including both public and userprivate ones)
- Our current prototype includes:
 - ✓ User dashboard organizing workflow (model creation, viewing, editing, publishing, …)
 - ✓ Simple model creation (synthetic topologies, such as linear, dumbbell, ring, star, ...)
 - ✓ Functions for graphically viewing and downloading models in various formats
- Expected major functions to be included in the full version: \bullet
 - ✓ Federated sign-on for GENI users
 - ✓ Incorporation of popular model generators (such as FNSS, BRITE, ...)
 - ✓ Sharing and forking public models, and publishing experiment results

YEXI	PERIMENT		Home Repo Search Account -
	Musa V. Ahmed Created Models		Create New Model
	Published Models 6	Private Models 5	
	FIU-ECS261-Lab-Topology		Tags: lab, fiu
	Topology of our research lab at FIU.		View
	3-Node-Star-Topology		Tags: star, myexperiment, node
	Star topology with three nodes generated with MyExperiment.		View
	Parking-Lot-Topolgy		Tags: parkinglot, slingshot
	Parking lot topolgy imported from SlingShot.		View
	4-Node-Ring-Topology		Tags: nodes, ring
	Ring topology with 4 nodes generated with MyExperiment.		View
		« 1 2 »	
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MyExperiment: https://github.com/netsym/myexp

PrimoGENI: https://github.com/netsym/primogeni

Modeling and Networking Systems Research Group:

http://www.primessf.net/

