Status of NextGen Hyak

Deployment Timeline

- Initially targeted October delivery

- Delays associated with staffing levels

- Revised for December delivery

Revised Timeline

- December 3……Delivery……Success!

- December 14…..Power On…Success!

- Today OmniPath config only large item remaining

- February 6………Charter Member Access Begins

- March 6………….General Availability

Post GA

- Updating documentation

- Fleshing out all software tools

- Scrubbed scratch storage availability

- Refined protocols for running on IKT and MOX
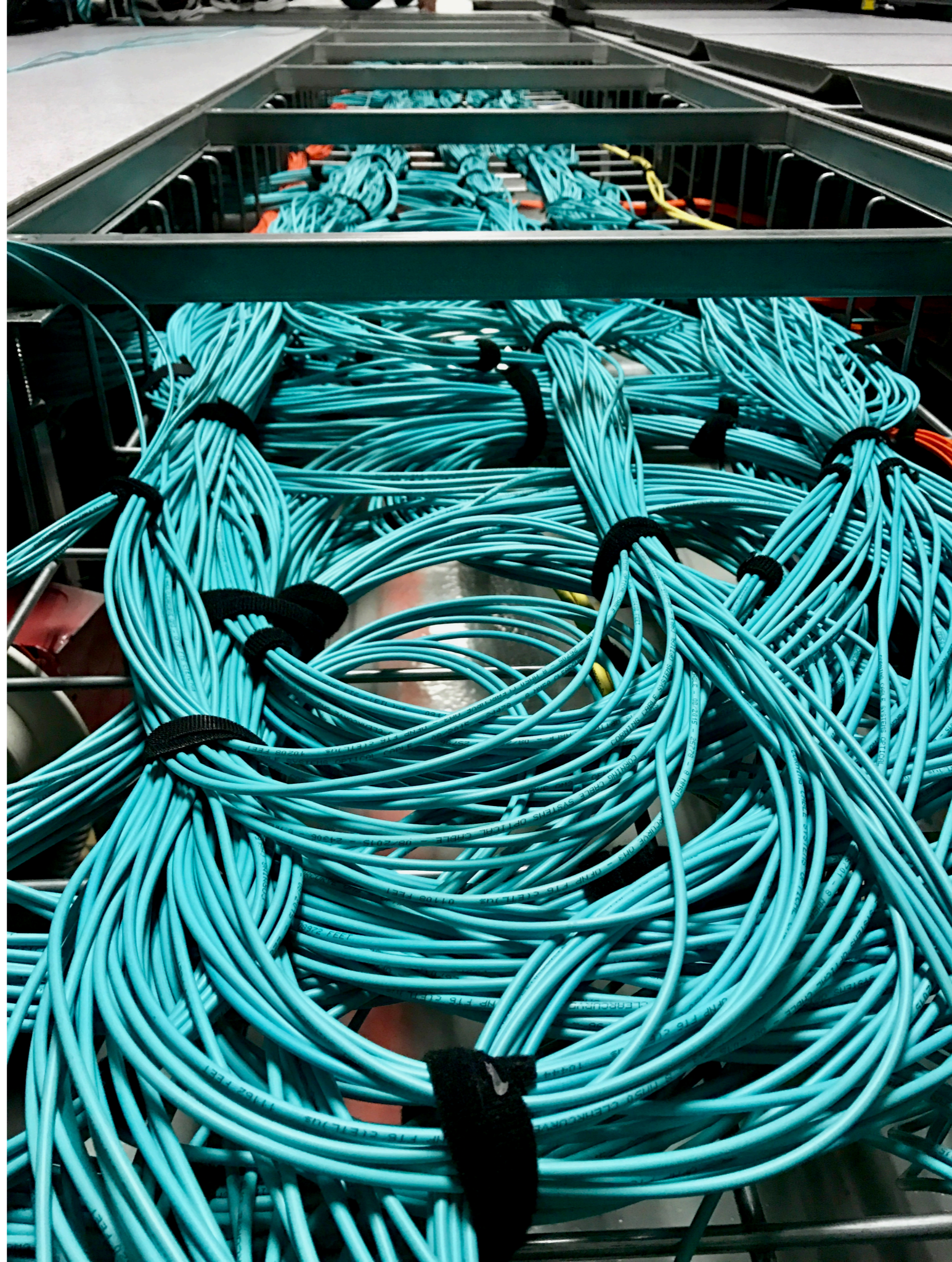
MOX.hyak Charter Members

		Node Type (GB)				Notes
Customer	Sponsor	128	256	512	TOTAL	Notes
Chemistry	A&S		18		**18**	Departmental
ChemE	CoE		13		**13**	MRI
Chemistry	A&S		37		**37**	MRI
Physics	A&S		65		**65**	Nuclear physics
HPCC	STF	40			**40**	HPC Club - STF
TOTAL		**40**	**133**	**0**	**173**	

MOX.hyak FIRST EXPANSION

# Nodes	PI	Department	Certainty
28	ferrante	astro & aero engineering	order placed
2	aliseda	mecahnical engineering	order placed
1	bulgac	nuclear physics	order placed
12	reschke	UW-IT	certain
1	easton	college of the environment	certain
15	ackerman	JISAO	high
8	thompson	oceanography	high
120	baker	HHMI	medium
1	mecheer	mechanical engineering	medium
36	herman	JISAO	low
224			

Phase	#	∑#	%	∑ %	# Remaining	% Remaining
Charter	173	173	40%	40%	259	60%
First Expansion	224	397	52%	92%	35	8%
Total Available	432		1			

Overview of Hyak MOU

Biggest Changes

- Now governs **ALL HYAK**: IKT.hyak + MOX.hyak

- Establishes a **CORE FACILITY** which sponsors join

- Sponsors pay to support "**RACKS**" of 50 nodes

- Payment for # of racks full or partially occupied due July 1 of each Fiscal year (we're behind this year)

- Rate increase from $500/slot/year to **$800/slot/year**

- Effect of rate changes varies

Biggest Upgrades

- 10 x increase in network bandwidth (100Gbs)

- 2 x reduction in network latency (< 2µs)

- 2 x increase in standard RAM (128GB)

- 1.7 x increase in standard node throughput

- 5 x increase in standard scratch quota (500GB/node)

Other Big Changes

- Scheduler change from Moab/Torque to **Slurm**

- **>= 200TB "scrubbed" scratch at no cost**

- Node-local persistent storage no longer supported

- Jobs now run on HW >= user purchase instead of serial # match

- "**Instant On**" provisioning for small & medium orders

Calculating Your Cost

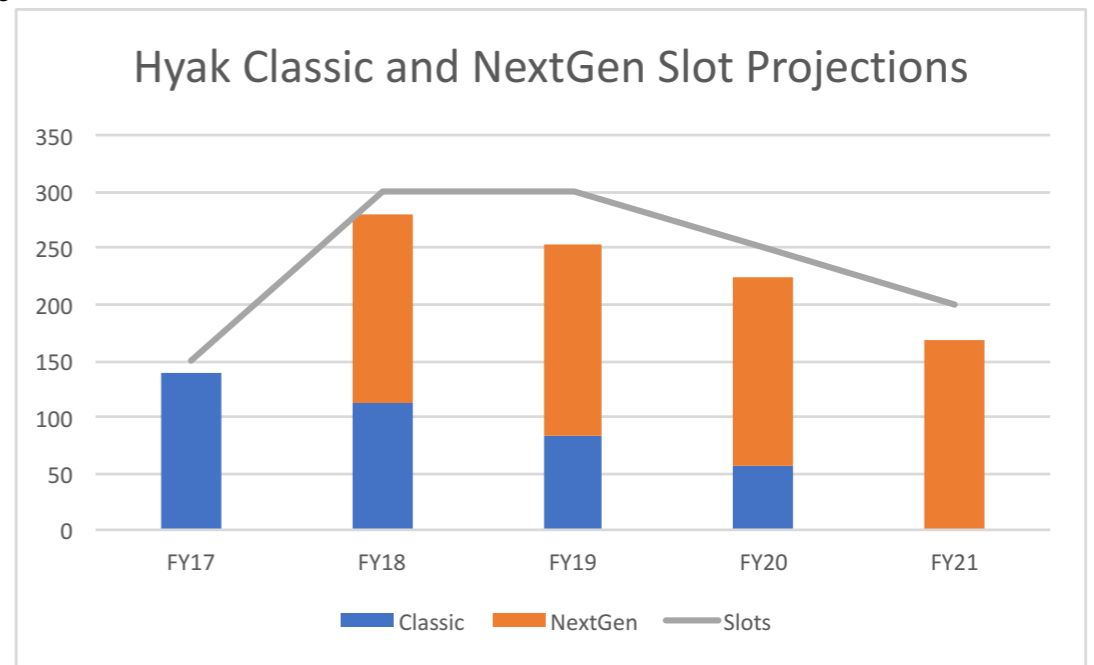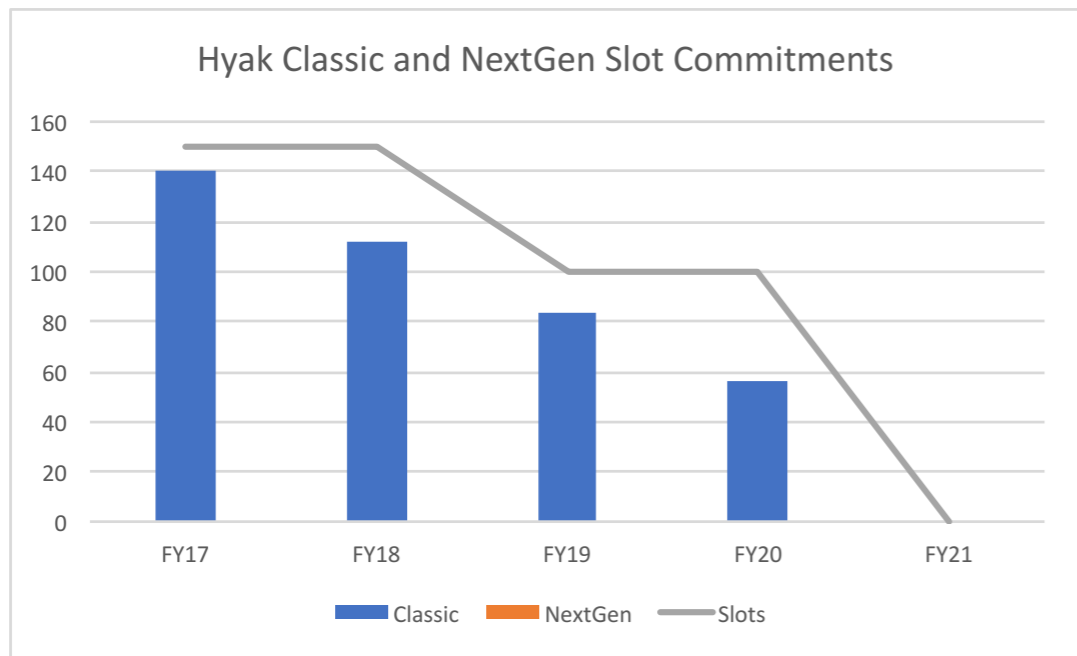**HHMI**

	Current Commitment Plot Data				
	FY17	FY18	FY19	FY20	FY21
Classic	140	112	84	56	0
NextGen	0	0	0	0	0
TOTAL	140	112	84	56	0
Slots	150	150	100	100	0
$$	$120,000	$120,000	$80,000	$80,000	$0

$400,000
$80,000

	Projected Commitment Plot Data				
	FY17	FY18	FY19	FY20	FY21
Classic	140	112	84	56	0
NextGen	0	168	168	168	168
TOTAL	140	280	252	224	168
Slots	150	300	300	250	200
$$	$120,000	$240,000	$240,000	$200,000	$160,000

$960,000
$192,000

Hyak Classic and NextGen Slot Commitments

Hyak Classic and NextGen Slot Projections

# Nodes	Sponsorship
140	$120,000

Enter the number of nodes you plan to operate in the GREEEN cell
The total, single-year sponsorship cost appears in the ORANGE cell

Status of Sponsorship

- College of Engineering   near complete

- College of the Environment   near complete

- HHMI / Baker   underway

- College of Arts & Sciences   yet to meet

- UW Bothell   yet to meet

- Department of Biochemistry   yet to meet