System Hosting Comparison
The hardware and software Central Penn has in place for Jenzabar CX, JICS (my.centralpenn), and Feith are at the end of their useful life.
We are contemplating two options as shown below.

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S. Birmingham

Option 1: Jenzabar hosts our key student systems (CX, JICS, Feith) in their Cincannati and Dallas data centers

Ref. #	Description	Type	2013	2014	2015	2016	2017	2018	Total
1	Hosting fees (inc. $3,200 setup fee in year 1)	Service	$ 50,360	$ 47,160	$ 47,160	$ 47,160	$ 47,160	$ 47,160	$ 286,160
2	Server for CX and the CX database (HP Unix or Linux)	Hardware	inc. in #1	inc. in #1	inc. in #1	inc. in #1	inc. in #1	inc. in #1	$ -
3	Annual maintenance contract for HP Unix or Linux server	Service	inc. in #1	inc. in #1	inc. in #1	inc. in #1	inc. in #1	inc. in #1	$ -
4	Servers for MS Remote Desktop Services for CX users (2)	Hardware	inc. in #1	inc. in #1	inc. in #1	inc. in #1	inc. in #1	inc. in #1	$ -
5	Server for SQL server databases for Feith and JICS	Hardware	inc. in #1	inc. in #1	inc. in #1	inc. in #1	inc. in #1	inc. in #1	$ -
6	Servers for IIS/JICS primary and testing (2)	Hardware	inc. in #1	inc. in #1	inc. in #1	inc. in #1	inc. in #1	inc. in #1	$ -
7	Server for Feith application	Hardware	inc. in #1	inc. in #1	inc. in #1	inc. in #1	inc. in #1	inc. in #1	$ -
8	Server for MS Active Directory	Hardware	inc. in #1	inc. in #1	inc. in #1	inc. in #1	inc. in #1	inc. in #1	$ -
9	Backup and storage for all servers (800GB)	Service	inc. in #1	inc. in #1	inc. in #1	inc. in #1	inc. in #1	inc. in #1	$ -
10	Data center infrastructure (racks, cooling, security, cabling, circuits, etc.)	Hardware	inc. in #1	inc. in #1	inc. in #1	inc. in #1	inc. in #1	inc. in #1	$ -
11	24 X 7 monitoring and support of servers, network, HVAC, etc.	Salary	inc. in #1	inc. in #1	inc. in #1	inc. in #1	inc. in #1	inc. in #1	$ -
12	Annual maintenance contract for Suse Linux Enterprise 11.0	Service	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 6,000
13	MS Windows Server 2008 R2 64-bit enterprise (2)	Software	$ 117	$ 117	$ 117	$ -	$ -	$ -	$ 350
14	MS SQL Server 2008 R2 64-bit Standard	Software	$ 250	$ 250	$ 250	$ -	$ -	$ -	$ 750
15	MS External Connector	Software	$ 167	$ 167	$ 167	$ -	$ -	$ -	$ 500
16	MS-RDP for CX users (100)	Software	$ 667	$ 667	$ 667	$ -	$ -	$ -	$ 2,000
17	Implementation/configuration costs	Service	$ 20,000	$ -	$ -	$ -	$ -	$ -	$ 20,000
18	Batteries to withstand short power outages (UPS)	Hardware	inc. in #1	inc. in #1	inc. in #1	inc. in #1	inc. in #1	inc. in #1	$ -
19	Generator to withstand long power outages (12kW)	Hardware	inc. in #1	inc. in #1	inc. in #1	inc. in #1	inc. in #1	inc. in #1	$ -
20	Annual generator maintenance	Service	inc. in #1	inc. in #1	inc. in #1	inc. in #1	inc. in #1	inc. in #1	$ -
21	Migrating data from the Unix OS to Linux OS	Service	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ 10,000
22	Rewriting any custom Unix functionality	Service	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ 10,000
	Total by year		$ 92,560	$ 49,360	$ 49,360	$ 48,160	$ 48,160	$ 48,160	

Grand total for six years: $ **335,760**   (includes a $3,600 capital outlay in 2013)

Option 2: Central Penn hosts our key student systems (CX, JICS, Feith) in Bollinger 54a and Bollinger 56

Ref. #	Description		2013	2014	2015	2016	2017	2018	Total
1	Hosting fees (inc. $3,200 setup fee in year 1)	Service	n/a	n/a	n/a	n/a	n/a	n/a	$ -
2	Server for CX and the CX database (HP Unix or Linux)	Hardware	$ 8,000	$ 8,000	$ 8,000	$ 8,000	$ 8,000	$ -	$ 40,000
3	Annual maintenance contract for HP Unix or Linux server	Service	$ 11,200	$ 11,200	$ 11,200	$ 11,200	$ 11,200	$ 11,200	$ 67,200
4	Servers for MS Remote Desktop Services for CX users (2)	Hardware	n/a	n/a	n/a	n/a	n/a	n/a	$ -
5	Server for SQL server databases for Feith and JICS	Hardware	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ -	$ 5,000
6	Servers for IIS/JICS primary and testing (2)	Hardware	$ 2,000	$ 2,000	$ 2,000	$ 2,000	$ 2,000	$ -	$ 10,000
7	Server for Feith application	Hardware	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ -	$ 5,000
8	Server for MS Active Directory	Hardware	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ -	$ 5,000
9	Backup and storage for all servers (800GB)	Service	$ 4,875	$ 4,875	$ 4,875	$ 4,875	$ 4,875	$ 4,875	$ 29,250
10	Data center infrastructure (racks, cooling, security, cabling, circuits, etc.)	Hardware	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ -	$ 100,000
11	24 X 7 monitoring and support of servers, network, HVAC, etc.	Salary	$ 16,000	$ 16,000	$ 16,000	$ 16,000	$ 16,000	$ 16,000	$ 96,000
12	Annual maintenance contract for Suse Linux Enterprise 11.0	Service	n/a	n/a	n/a	n/a	n/a	n/a	$ -
13	MS Windows Server 2008 R2 64-bit enterprise (2)	Software	$ 117	$ 117	$ 117	$ -	$ -	$ -	$ 350
14	MS SQL Server 2008 R2 64-bit Standard	Software	$ 250	$ 250	$ 250	$ -	$ -	$ -	$ 750
15	MS External Connector	Software	$ 167	$ 167	$ 167	n/a	n/a	n/a	$ 500
16	MS-RDP for CX users (100)	Software	n/a	n/a	n/a	n/a	n/a	n/a	$ -
17	Implementation/configuration costs	Service	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ 10,000
18	Batteries to withstand short power outages (UPS)	Hardware	$ 400	$ 400	$ 400	$ 400	$ 400	$ -	$ 2,000
19	Generator to withstand long power outages (12kW)	Hardware	$ 3,000	$ 3,000	$ 3,000	$ 3,000	$ 3,000	$ -	$ 15,000
20	Annual generator maintenance	Service	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 3,600
21	Migrating data from the Unix OS to Linux OS	Service	n/a	n/a	n/a	n/a	n/a	n/a	$ -
22	Rewriting any custom Unix functionality	Service	n/a	n/a	n/a	n/a	n/a	n/a	$ -
	Total by year		$ 79,608	$ 69,608	$ 69,608	$ 69,075	$ 69,075	$ 32,675	

Grand total for six years: $ 389,650 (includes a $183,600 capital outlay in 2013)

Notes:

Server purchases are depreciated over 5 years

Software purchases are depreciated over 3 years

Server for CX estimated at $40,000. All other servers estimated at $5,000 each

24 X 7 outsourced monitoring estimated at $1,000/yr/device for 16 devices (8 servers, 4 network devices, 4 air conditioners)

Generator is sized to handle about 12 servers, 12 network devices, and air conditioning

Option 1 would include new servers every two years. Option 2 would include new servers every 5-7 years

Although both options include full data backups, our average recovery time with option 1 is hours, versus days with option 2

Some Jenzabar customers have noticed improved system speed with option 1, but they've also noted occasional network issues

Data for this comparison was gathered by A. Bock and S. Birmingham and verified by Jenzabar.

If we can identify a vendor to monitor and service our systems 24/7, we could perhaps lower the cost of item 11 and make option 2 closer in price to option 1