



Chassis/sleds

Q: Can server nodes be mixed in the same FX2 enclosure?

A: This is not supported at ready to ship (RTS). As Dell releases these products, there will eventually be the ability to do mixing with FC630s and FD332, FC430 and FD332 or FC630, FC830 and FD332. FM120 cannot be combined with other products and requires the FX2 chassis [no peripheral component interconnect (PCI) slots].

Q: There are two chassis. How do we know which servers go into the different chassis?

A: There are two separate chassis: FX2 and FX2s. The FX2 chassis does not have PCI slots, while the FX2s chassis does have PCI slots. Think of the "s" as "switch," meaning that the FX2s chassis has the peripheral component interconnect express (PCIe) mezzanine card on board, allowing the servers to attach to the PCI slots.

The **FX2** chassis supports FM120x4, FC630, FC430 and FC830. FM120x4 can only use the FX2 chassis, because it does not require the PCI slots. The FX2 chassis has no PCIe slots or PCI switching, as opposed to the FX2s chassis. Also, the input/output (I/O) is a networking fabric-A LAN on motherboard (LOM) connected to a 1Gb or 10Gb pass-through or input/output aggregator (IOA). When the PCI slot option is not going to be used, FC430, FC630 and FC830 can use this chassis.

The **FX2s** (switch) chassis supports FC430, FC630 and FC830, but not FM120x4. These products can take advantage of both the PCI slots and I/O pass-through modules. The FX2s chassis has PCIe slots, PCIe switching to enable the future storage sled, low-profile PCIe slots and the IOA is networking fabric-A.

Q: Are there still different versions of FX2s if you want to use future FX nodes?

A: There are multiple front bay options that are configured at the factory depending on the type of sled in the front. Technically, this can be changed in the field but it is very messy and we're not likely to be able to acquire bay-conversion kits for the field. Because of this, you want to carefully plan out ahead of time what you want to put in the chassis. Again, this is a small, relatively inexpensive chassis so you shouldn't need as much mix/match within a single 2U chunk.

- Two bay: supports two FC830
- Three bay: supports one FC830 plus two FD332s
- Four bay: supports all 1/2-width nodes, FM120, FC6x0, FD332
- Six bay: supports four 1/4-width nodes plus two FD332
- Eight bay: supports eight 1/4-width FC430s

Q: Can FC630 and FC430 also be used in the M1000e chassis (or VRTX)?

A: No, while they share many similarities in design, they are not physically compatible.

Q: Is FX2 like VRTX?

A: Not exactly. VRTX and FX systems are both flexible, converged-infrastructure offerings from Dell and both use much of the same basic server design, but they are different in a couple of ways:



- VRTX is designed specifically for the remote office/branch office (ROBO) market with its quiet, office-friendly tower form factor. FX is designed for the data centre and cloud infrastructures, with a highly scalable, modular design.
- VRTX and FX cannot interchange server sleds. The physical design of the server enclosure is different and does not allow interchanging them.
- VRTX allows for shared storage through the use of a shared PowerEdge RAID controller (PERC) card. FX systems are designed for direct-attached storage and must be directly assigned to a specific FD332 storage block (FD332 will be available in early 2015).

Q: What latency is being introduced because of the PCI switch?

A:

Mezzanine	Latency	PSB, PCI switchboard	Latency	Total latency	Notes
PEX8733	132ns	PEX8780	150ns	282ns	Cut-through mode and not measured

Storage, Express Flash

Q: Do FX servers support Express Flash drives?

A: FC630 supports two non-volatile memory express (NVMe) Express Flash PCIe drives at RTS. FM120x4 does not support PCIe drives, nor does FC430.

Q: Will there be a storage solution for the FX2 platform?

A: Dell plans to release the FD332 storage node in early 2015. It will support 16 direct-attached drives per FD332.

PCIe, I/O, graphic-processing units (GPUs)

Q: What kinds of PCI cards are allowed in FX2s chassis?

A: FX2s chassis supports the same low-profile cards supported in PowerEdge racks. Much like the racks, the slots have 24-watt limitations.

Q: Can you install a stand-up PCIe card in the chassis without powering down the entire chassis?

A: Yes, you can install a PCIe card into the chassis without powering the chassis down, but you will have to power down the sled associated with the PCIe card to have it recognise and use the PCIe card.

Q: Can I map and re-map PCI slots to different nodes?

A: Not at this time.

Q: Can you mix 1Gb and 10Gb pass-thru modules or IOA modules?

A: No, when using two modules they must be heterogeneous.

Q: Can you mix IOA modules with pass-thru modules?

A: No, when using two modules they must be homogeneous.



Q: Are there any GPUs supported with FX2?

A: No, GPUs cannot be supported in the FX2 chassis. These cards are typically full-length and power intensive, requiring a secondary power source.

Power

Q: Can you mix power supply sizes?

A: No – 1600w supplies are always required for FC630, FC430 and FC830, no matter which of the two chassis are used. FM120 only supports the 1100w supply. There is a 2000w power supply unit (PSU) planned for FC430 and FC830 in early 2015.

Q: Are there any node configurations where we would lose 1+1 power supply redundancy?

A: Yes, there are some FC430 configurations that do not support 1+1 redundancy. As a rule of thumb, two fully loaded FC630s can support 1+1 redundancy. More information will be coming in the near future.

Q: How does power capping work in FX2? How does that compare to M1000e?

A: It is the same as M1000e for FC430 and FC630 sleds.

Q: Can I have both vFlash and Mirrored SD cards in a FC420 at the same time?

A: No, much like the M420, you can either have redundant hypervisors or hypervisor and vFlash.

System management

Q: Will FX2 support Active System Manager (ASM) 7.5?

A: The FX2 platform is planned to support the 7.5.1 release of ASM.

Q: What happens when I plug in two network cables to the chassis management controller (CMC) when it's in stacking mode?

A: Connecting the STK/Gb2 port to the management network without first configuring for redundancy in the CMC can have unpredictable results. Cabling Gb1 and STK/Gb2 to the same network (broadcast domain) can cause a broadcast storm.

Q: If you daisy chain CMCs up to 20, what operations are allowed?

A: Same as the multi-chassis management in M1000e. You get to view inventory, the ability to launch element managers (e.g., iDRAC, CMC of other chassis from the single view) and alerts, and you can replicate chassis settings from the lead to new members.

Q: Is FlexAddress supported in all FX2 configurations, and does it include all PCIe network interface cards (NICs)?

A: Yes, via the enterprise CMC licence. It is for LOMs only at this time

Q: Is the CMC's redundant mode just redundant network ports? How do I get redundant CMC?

A: Redundant CMCs are not supported. However, a new feature for the FXs is that each iDRAC can now see everything in the chassis including power supplies, fans, etc. This results in consistent information on the entire chassis even when not using the CMC.



Q: What behavior does the chassis exhibit if the CMC fails?

A: Fans will go to 100 percent speed and new servers will not be allowed to power on.

Q: Will we have an iDRAC shared LOM option for nodes, or does all iDRAC traffic have to run through the CMC?

A: All iDRAC traffic runs through the CMC just like a blade chassis. Shared LOM option will not be available until early 2015.

Q: Do FM120 iDRACs support vFlash? If not, is there any way to store configuration information remotely, i.e., a network share or USB stick?

A: The FM120 does not support vFlash. Configuration settings can be saved on a network file share.

Q: How does iDRAC/ Lifecycle Controller (LCC) parts replacement work in FC120?

A: It would be the same as the FC420/620 – parts replacement is stored in LCC. For full sled/board replacement, see above.

Q: Can IOA be fully managed from CMC, including fibre channel (FC) ports?

A: Yes, just like an M1000e, it is exactly the same. There is no configuration needed for the FC ports.