# PowerEdge MX7000 Acoustical Baffle

Tech Note by:

Paul Waters

Amrita Maguire

## SUMMARY

For highly-sensitive noise environments, the new PowerEdge MX7000 offers an optional Acoustical Baffle.

Users have commented that the baffle improved sound quality "to a kind of white noise".

Installation of the MX7000 Acoustical Baffle can be performed quickly in the field, no tools required.

Modular systems can be loud:  The power, density, scalability and dynamic range of rack-mounted modular systems (such as PowerEdge blade enclosures and PowerEdge FX2) requires a powerful cooling capability that can generate more acoustical energy than a traditional rack-mount server.  Customers that choose the scalability and flexibility of a modular platform often sacrifice noise sensitivity in the process and are left with few choices when it comes to mitigating the increased noise associated with these products.  In the 14th-generation of PowerEdge servers, Dell EMC has embraced this acoustical challenge and worked with a jury of IT professionals to develop several solutions for customers to reduce the noise impact of modular systems  One of these solutions is the MX7000 Acoustical Baffle.



*Image 1:  The new PowerEdge MX7000 modular platform*

The acoustical baffle is an optional, simple-to-install add-on that snaps to the rear of the MX7000 chassis directly behind the rear fans.  When installed, the baffle improves the acoustical output of the rear fans and diffuses some of the airflow away from someone working behind the chassis.  The acoustical baffle is specifically designed for noise-sensitive deployments that may require temporary or permanent noise mitigation.  IT professionals surveyed on the performance of the baffle reported that it improved sound quality "to a kind of white noise", and that it "removed shrill tones by muffling the higher frequencies".  Most importantly, when the baffle is deployed in conjunction with the Sound Cap profile in iDRAC, noise levels typically remain low enough to carry on a conversation within a meter of the chassis.

**DELL**EMC

**MX7000 Acoustical Baffle installation instructions**

Installation of the MX7000 Acoustical Baffle is simple and straightforward:

1. Access the rear of an MX7000 chassis.
2. Align the acoustical baffle with arms facing (inwards) toward the rear of the chassis and optical window on the bottom.
3. Locate the cut outs on each side of the rear of the chassis.
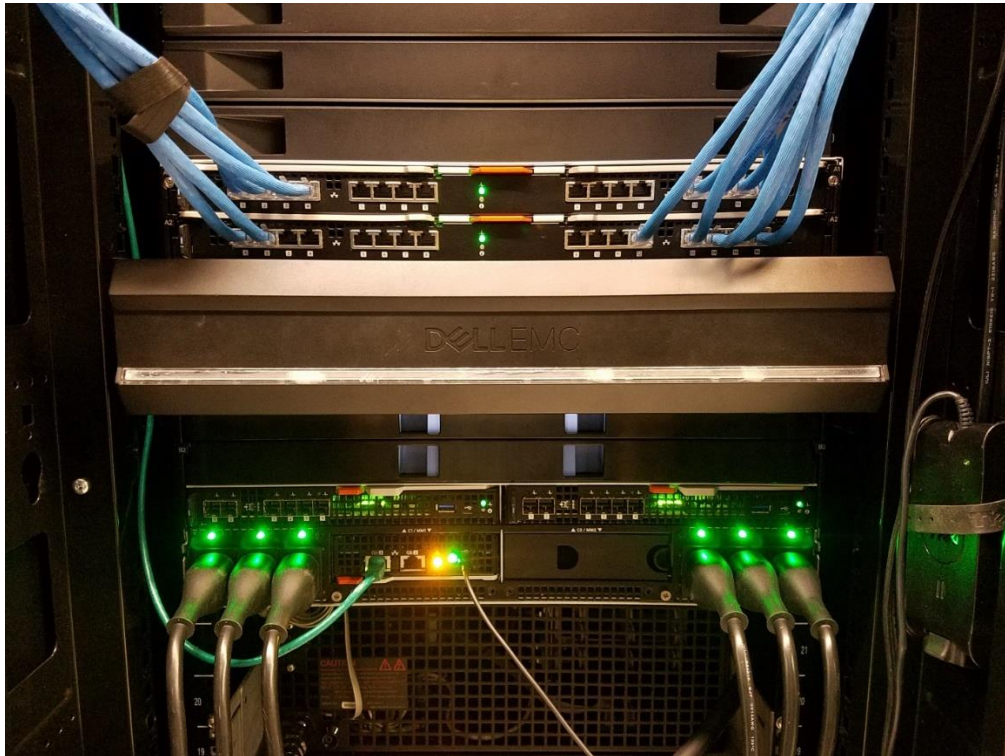4. Push the baffle until the tabs engage onto the chassis.



*Image 2: MX7000 Acoustical Baffle installed at the rear of MX7000 chassis.*

**MX7000 Acoustical Baffle restrictions**

- Although the geometry of the MX7000 Acoustical Baffle is optimized to minimize any impact to the cooling capability of the rear fans, the baffle is not recommended for systems configured with CPU's that have TDP specifications greater than 140W[1] operating in environments warmer than 35°C.  In these situations, system performance may be impacted.

- The acoustical baffle is not designed as a cable management tool and cannot support the weight of cables. Do not lay cables on the baffle or affix cables to the baffle.

**Conclusion**

For noise-sensitive deployments, the optional PowerEdge MX7000 Acoustical Baffle can be installed to mitigate acoustical output.  The acoustical baffle improves sound quality "to a kind of white noise", as users have commented. Users comfortable with Data Center levels of noise need not install the optional acoustical baffle, but where quiet operation is paramount, the MX7000 Acoustical Baffle is highly effective.

Notes:
1. Performance of some low core-count processors with TDPs below 140W may also be impacted by the presence of the baffle in higher ambient environments.  Reach out to your Dell representative for more information.