

# Determining the best enclosure solution

There are many factors which go into determining the best enclosure solution. The checklist below will guide you through many of the elements you'll need to consider. Once you have determined the required specifications, our data center specialists are available to configure the best solution for you.

Enclosure Features	Specifications (enter application requirements)
<p><b>Enclosure Size</b> The most important factor is rackmount space. Equipment is generally measured in rack units (RU) and the most common size is 42RU. Each RU equals 1.75". The most common enclosure widths are 24" and 30" and the depth is generally between 42" and 48" – the most common being 42".</p>	Height (RU): _____ Width (24"/30"): _____ Depth (in): _____
<p><b>Static Weight Loads</b> An estimate of the anticipated weight load of the IT equipment is key as the load will vary depending on the application. Load can vary widely depending on the application. A networking application load would generally be under 2,000 lbs. A high-end switch configuration would be between 1,500 and 3,000 lbs.</p>	Weight load (lbs.): _____
<p><b>Casters/Levelers/Anchoring</b> Are casters required? Generally, all enclosures will come with levelers – regardless of whether there are casters. Will the enclosure be anchored to the floor? Is an anti-tip feature required? Will the enclosure be loaded then rolled on casters? If so, knowing the "rolling" or dynamic weight load is critical.</p>	Casters: ( Y / N ) Anchor brackets: ( Y / N ) Anti-tip: ( Y / N ) Dynamic load requirement: _____
<p><b>Side Panels and Divider Panels</b> Enclosures may stand alone or be bayed (or ganged) together. Typically, a stand-alone enclosure requires side panels. If an enclosure is placed at the end of a row, you will want one side panel on the end of the row. Additionally, where enclosures are bayed with adjacent enclosures, side panels are not required. However, if bayed, you may need a divider panel between adjacent enclosures for airflow management and/or security. In a typical installation, you may have some of each of these configurations.</p>	End of row: ( Y / N ) Qty: _____ Bayed: ( Y / N ) Qty: _____ If bayed, dividers? ( Y / N ) Stand-alone: ( Y / N ) Qty: _____
<p><b>Seismic Requirements</b> Does this enclosure require a NEBS GR-63-Core seismic test certification? Please note that this is different from seismic anchoring. Generally the weight load in these applications is between 800 lbs. and 1,300 lbs.</p>	Seismic: ( Y / N )
<p><b>Front Doors and Locks</b> Do you need solid or perforated front doors? Full or split doors (full perforated is most common on front doors)? What are the lock requirements (key lock, combo lock, HFID lock)?</p>	Solid or perforated? Full or split? Lock type (key/combo/HFID)?
<p><b>Rear Doors and Locks</b> Do you need solid or perforated rear doors? Full or split doors (split perforated is most common on rear doors without chimneys – see airflow management requirements)? What are the lock requirements (key lock, combo lock, HFID lock)?</p>	Solid or perforated? Full or split? Lock type (key/combo/HFID)?
<p><b>Top Panels</b> Any special features required on the top panel? Are brushes needed on cable cutouts to ensure hot air is contained in the enclosure? Are networking cable cutouts required for large quantities of cables? Do you need troughs to manage cabling on the top of the enclosure?</p>	Top panel requirements (cable egress/brushes/networking cable cutouts/troughs): _____ _____
<p><b>Rails</b> Generally rails are available in two configurations – square holes for use with cage nuts, or tapped holes for direct mounting. Square holes are the most common. Note: if a 30" wide enclosure is selected, please specify if 19" (EIA) or 23" (Telco) mounting is needed.</p>	Square holes or tapped? For 30" wide – 19" or 23" mounting?
Airflow Management	
<p><b>Hot Aisle/Cold Aisle</b> Is the enclosure in a hot aisle/cold aisle installation? If yes, ensure that the open area in front of the rails is blocked off to avoid hot air remixing. Gasketing options are recommended.</p>	Hot aisle/cold aisle installation?
<p><b>Blanking Panels</b> One of the most important accessories for airflow management is blanking panels, which are used to cover unused RU spaces. Specify the anticipated number of unused spaces in the enclosure.</p>	Blanking panels: ( Y / N ) Qty: _____



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Airflow Management (continued)	
<b>Floor Grommets</b> Do you need access through the raised floor tiles in the white space? Grommets allow cable egress/ingress – but retain hot/cold air separation.	Floor grommets needed: ( Y / N )
<b>Chimney</b> For installations where the hot air is to be ducted to an overhead plenum – a chimney would be required unless the enclosure is in a hot aisle containment configuration. Chimneys can solve thermal issues on isolated enclosures. If a Chimney is used, the rear door must be solid.	Chimney required: ( Y / N ) Any special installation concerns (low ceiling, overhead cabling, obstructions)?
Cable Management	
<b>Front Cable Management</b> What type of cabling is expected? If low levels of cabling, then cable rings or a lacing bar with Velcro straps will be a good solution for a typical networking application. For high levels of cabling or fiber, it's important to specify the quantity and type of cables. Based on these requirements, recommendations will be suggested which could include horizontal managers, waterfalls, vertical cable managers, lacing bars, etc.	Describe the amount and type of cabling: _____
<b>Rear Cable Management</b> Rear cabling is common on server applications. If low levels of cabling are expected, then cable rings or a lacing bar with Velcro straps is a good solution. For high levels of cabling or fiber, it's important to specify the quantity and type of cables. Based on these requirements, recommendations will be suggested which could include horizontal managers, waterfalls, vertical cable managers, lacing bars, etc.	Describe the amount and type of cabling: _____
<b>Inter-cabinet Cabling</b> Will there be cables passing from cabinet to cabinet in the 'hot zone' (i.e. behind the rails)?	Inter-cabinet cabling ( Y / N ) Qty: ____ Type of cabling: _____
<b>Cabling Above Enclosure</b> Do you need cable management such as ladder racks or wire baskets above the rack?	Provide details on the types of overhead cabling required: _____
Power	
<b>Rack PDUs</b> Specify the quantity and type of ePDUs needed to power the enclosure. Eaton has an extensive offering of rackmount power distribution solutions. Visit <a href="http://www.eaton.com/epdu">www.eaton.com/epdu</a> for details.	Specify power distribution requirements: _____
<b>UPS</b> Is power backup needed? Rackmount? Power and duration needed? For details on the range of UPS solutions for data center enclosures visit: <a href="http://www.eaton.com/ups">www.eaton.com/ups</a> .	Specify power backup requirements: _____
<b>Management/Monitoring</b> Is power monitoring/management required? Is temperature/environmental monitoring needed?	Specify management and monitoring requirements: _____
<b>Grounding</b> Any special requirements?	Specify grounding requirements: _____
Other Considerations	
<b>Certifications/Compliance Requirements</b> UL listing, 2416, OSHPD, etc.	Define Requirements: _____
<b>Special Packaging Needs</b> Reusable packaging? Heavy duty packaging for shipping integrated enclosures? Crate?	Define special packaging needs if any: _____
<b>Color</b> Specify the color of the enclosure. Black is the most common with NuGrey (light grey) the next most popular choice.	Specify the color: _____

For more information, please visit:  
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