# Disaster Recovery Checklist

How To Prepare the Data Center for Disaster Events

VERTIV™

| Assessment Item | Recommended Action | Complete |
|---|---|---|
| **EXISTING PLANS** | | |
| Assess data center risks/threats | Perform a risk/threat assessment; ensure appropriate first aid equipment is available and that employees are trained to use it | ☐ |
| Benchmark data center | Compare the data center to disaster reocvery data center standards | ☐ |
| Review the data center plan(s) | If a documented plan is not in place, develop one, and have it approved; include procedures for a graceful shutdown with priority of shutdown/power-up process | ☐ |
| Communication plan | Determine how communications will be conducted with employees, management, vendors, etc. in a disaster event | ☐ |
| Weatherproofing | Secure loose items, doors, and windows and clear all drains, have sandbags ready in high flood zones | ☐ |
| Tabletop test or drill of the plan | Come together annually to ensure all employees and team members have reviewed the plan and understand their roles and responsibilities | ☐ |
| Keep the plan up to date | Review and test the plan two times a year | ☐ |
| Photograph or video tape facilities | Have visual inventory of the interior and exterior of data center facilities for insurance purposes | ☐ |
| **BUILDING CONSTRUCTION** | | |
| Type of construction | Consider the materials used for the building envelope; for wood and glass structures, special precautions may need to be taken for fires and high winds | ☐ |
| Structural integrity | Consider if the facility can withstand severe weather conditions | ☐ |
| Floor loading per square foot | Check to ensure your floor's weight limit has not been exceeded. | ☐ |
| **BUILDING LOCATION** | | |
| Promiximity to major highways, streets, rail lines or aircraft flight paths | For new builds, avoid proximity to hazardous waste routes and ensure another option for evacuation from existing facilities near these items | ☐ |
| Location with regard to bodies of water, e.g., rivers, lakes, oceans | Avoid building in possible flood zones | ☐ |
| Traffic control devices | Ensure your exits don't feed major roadways that are dependent on working traffic signals | ☐ |
| Proximity to other buildings | Know what occupants of nearby buildings are doing to avoid any unplanned network outages due to related work or construction | ☐ |
| Proximity to earthquake zone | Ensure racks and devices within racks are fully secured | ☐ |
| Weather patterns | Avoid locations where severe weather patterns are common and take advantage of applications that track these weather patterns regularly | ☐ |
| CCTV cameras | Disperse cameras around the interior and exterior of your data center site | ☐ |

## BUILDING ACCESS & EXITS

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| Number and location of all exits | Make sure there is an appropriate number of access points for the number of people in the facility and that methods of exits are safe | ☐ |
| Access to exits from stairwells | Understand where to go from stairwells, especially if there is an inability to go down the stairs | ☐ |
| Exit identification | Ensure exits are clearly marked and exit routes identified on each floor and hallway | ☐ |
| Knox box | Ensure first responders know the location of the box and are trained on using it | ☐ |

## STAIRWAYS

| | | |
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| Number and location of stairways | Train employees to know where all stairwell exits exist | ☐ |
| Emergency lighting, signage and public address system in stairwells | Test systems and ensure connection to emergency, 24x7 battery backup | ☐ |
| Fire protection equipment | Have equipment that is solely dedicated to stairwells such as a stair chair and have fire department check equipment on a regular basis | ☐ |

## HVAC FACILITIES

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| HVAC equipment | Know the location and power supplies for the HVAC equipment and have a backup system in place | ☐ |
| Monitoring of HVAC systems and air quality | Have some form of monitoring in place | ☐ |
| Environmental controls | Ensure controls are available for each floor | ☐ |
| Fire protection equipment | Have a fire suppression system that is data center appropriate like a wet/dry system that should be tested regularly for leaks | ☐ |

## WINDOWS, DOORS & INTERIOR WALLS

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| Window access | Determine if windows are fixed or can be opened. Ensure windows can be secured in high wind such as taping, boarding, etc. | ☐ |
| Window glazing or covering | Consider glazing to minimize ultraviolet radiation or covers to minimize wind or blast damage | ☐ |
| Door construction | Install exterior doors that are solid and lockable, ensure glass doors are shatterproof, and use interior doors that are fire rated | ☐ |
| Wall materials | Have floor-to-ceiling walls, movable partitions, and drop ceilings that are fire rated | ☐ |

## ELECTRIC UTILITIES

| | | |
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| Location of breakers | Know location of all breakers and clearly mark them even on floorplans | ☐ |
| Cable routing and protection | Know types and routing detail for cables | ☐ |
| Power distribution to floors | Have some understanding of power distribution by floor with some type of contingency plan for rerouting power | ☐ |
| Data center Emergency Power Off (EPO) button | Make sure you have one, have it covered and is secured with something that can be broken in the case of an event | ☐ |
| Fire suppression | Verify there is firestop material at floor, wall and ceiling penetrations;, and ensure you have an extinguisher for an electrical fire | ☐ |
| Lightning protection | Have a lightning rod in place and surge protectors on all equipment | ☐ |
| Grounding and bonding | Work with facility's electrician to ensure proper grounding and bonding | ☐ |
| Fire protection equipment | Have equipment that is solely dedicated to areas of critical electrical infrastructure | ☐ |

## UTILITIES DISRUPTION

| | | |
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| Access points | Know the number and location of utility access points into the building | ☐ |
| Secure room for entry of utilities into the building | Keep all utilities together if possible and ensure nearby tools for turning utilities off | ☐ |
| Fire protection equipment | Have equipment that is solely dedicated to critical utility spaces | ☐ |
| Shut-off switches | Know the location and mark all shut-off switches | ☐ |
| Generator maintenance | Ensure generator is tested monthly and have a contract in place for 2-3 fuel providers | ☐ |
| Signage | Verify that the necessary signage exists in appropriate locations | ☐ |
| Vendor contacts | Compile or update list with utility provider names and numbers | ☐ |

## WATER & SEWER

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| Entry points into building | Know which entry points are vulnerable to water or sewage such as doors, windows, or roofs often affected during heavy rains; examine annually for loose tiles, cracks, etc. | ☐ |
| Location of mains and placement of water towers | Be prepared in case of water main breaks that can cause flooding outside of severe weather events | ☐ |
| Proximity to flood plain | Have a good understand of timing and characteristics of area flooding | ☐ |
| Routing of water, sewer, and gas lines as well as fiber and copper cables | Trace cable networks and understand if or where they intersect or merge | ☐ |

## FIRE

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| Notifications | Determine if notification will go to fire deparment or central reporting station | ☐ |
| Fire detection | Ensure system is designed for building-wide detection | ☐ |
| Monitors | Consider having monitors for each floor | ☐ |
| Smoke and ionization detection equipment | Ensure use of equipment that will trigger alarms for environmental conditions that are present at the early stages of a fire | ☐ |
| Fire suppression | Understand the type of extinguishment system in place such s dry pipe or water sprinklers | ☐ |
| Fire extinguishers | Know where extinguishers are located and ensure appropriate signage | ☐ |
| Fire drills | Schedule these practice events quarterly at a minimum | ☐ |
| Evacuation signage | Ensure directional signage on each floor and in offices | ☐ |
| Fire safety and evacuation plan | Document the ideal course of action during a fire and subsequent evacuation | ☐ |

## LOSS OF POWER, LIGHTING OR ELEVATORS

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| Emergency power | Install or check generator(s) and identify power outlets | ☐ |
| Generator | Ensure a secure location for the emergency generator(s) | ☐ |
| Fuel tank | Make sure tank has a gauge and is protected | ☐ |
| Fuel suppliers | Have both primary and alternate suppliers (at least three vendors) identified | ☐ |
| Power system test | Run test monthly | ☐ |
| Fuel-load system tests | Run tests quarterly | ☐ |
| Emergency lighting | Check that emergency lighting is available on all floors, in stairwells, and by exits and run regular test of the emergency lighting system | ☐ |
| Elevator safety | Conduct regular inspections; understand the power supply; plan for emergency access/egress; install signage to deter entry; and install emergency phones that are regularly tested | ☐ |

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