What is claimed is:

1. A thermal management cabinet for electronic equipment, comprising:
a cabinet frame having side walls and defining a front, a back, a top and a bottom, the cabinet forming a generally sealed enclosure for electronic equipment;

an electronic component storage area including at least one shelving rack for supporting electronic equipment in an interior section of the cabinet;

at least one inlet into a cool zone; and

at least one outlet out of a hot zone;

a baffle forming a neutral zone in the interior section, the baffle having a horizontal member separating a neutral zone from the cool zone, the baffle having a vertical member separating the neutral zone from the hot zone, wherein the neutral zone is substantially isolated by the baffle from air flowing through the cool zone and the hot zone.

2. The thermal management cabinet according to claim 1, wherein baffle is vertically moveable.

3. The thermal management cabinet according to claim 2, wherein the baffle comprises a thermal management plate that is formed of insulated material.

4. The thermal management cabinet according to claim 3, wherein the thermal management plate is formed of a plastic material backed with an insulator.

5. The thermal management cabinet according to claim 1, wherein the baffle comprises at least one of foam insulation and brushes.

6. The thermal management cabinet according to claim 5, wherein the brushes extend from the electronic component storage area to at least one of the side walls, front and back of the cabinet.

7. The thermal management cabinet according to claim 5, wherein the at least one foam insulation comprises two flexible foam pieces positioned to allow cables to be passed there between.

8. The thermal management cabinet according to claim 1, wherein the horizontal member is positionable.

9. The thermal management cabinet according to claim 1, wherein the horizontal member and vertical member are each independently positionable to change a size of the neutral zone.

10. A thermal management cabinet, for electronic equipment, comprising:

a cabinet frame having side walls and defining a front, a back, a top and a bottom, the cabinet forming a generally sealed enclosure for electronic equipment;

an electronic component storage area including at least one shelving rack for supporting electronic equipment in an interior section of the cabinet;

at least one opening in the top of the cabinet; and

at least one opening in the bottom of the cabinet;

at least one baffle in the interior section of the cabinet forming a neutral zone in the interior section, wherein the neutral zone is substantially isolated by the at least one baffle from air flowing through a cool zone and a hot zone, wherein the at least one baffle comprises a horizontal member and a vertical member, wherein the horizontal member separates the neutral zone from the cool zone and the vertical member separates the neutral zone from the hot zone;

wherein the cabinet is dimensioned to extend between a raised access floor of a building and a drop ceiling of a building, the access floor carrying cooled air and the drop ceiling venting heated air, wherein the bottom opening of the cabinet is alignable with an opening in the access floor such that air from the access floor passes into the cabinet, flows through the cool zone, flows through the electronic component storage area, and flows through the hot zone to exit the cabinet through the top opening, which is alignable with an opening in the drop ceiling.

CLAIMS

1. A thermal management cabinet for electronic equipment, comprising:

a cabinet frame having side walls and defining a front, a back, a top and a bottom of the thermal management cabinet, the thermal management cabinet forming a generally sealed enclosure for electronic equipment;

an electronic component storage area including at least one shelving rack for supporting electronic equipment in an interior section of the thermal management cabinet;

at least one inlet into a cool zone; and

at least one outlet out of a hot zone, the electronic component storage area forming a transition between the cool zone and the hot zone such that air flows from the cool zone, through the electronic component storage area, and into the hot zone;

a baffle forming a neutral zone in the interior section,

the baffle having a horizontal member separating a neutral zone from the cool zone and the neutral zone from the electronic component storage area,

the baffle having a vertical member separating the neutral zone from the hot zone, wherein the neutral zone is substantially isolated by the baffle from air flowing through the cool zone and the hot zone, wherein the horizontal member and vertical member are each independently positionable to change a size of the neutral zone, and

wherein the thermal management cabinet is dimensioned to extend between a raised access floor of a building and a drop ceiling of a building, the access floor carrying cooled air and the drop ceiling venting heated air, wherein the at least one inlet into the cool zone is alignable with an opening in the access floor such that air from the access floor passes into the thermal management cabinet, flows through the cool zone, flows through the electronic component storage area, and flows through the hot zone to exit the thermal management cabinet through the at least one outlet, which is alignable with an opening in the drop ceiling.

2. The thermal management cabinet according to claim 1, wherein the baffle comprises a thermal management plate that is formed of insulated material.

3. The thermal management cabinet according to claim 2, wherein the thermal management plate is formed of a plastic material backed with an insulator.

4. The thermal management cabinet according to claim 1, wherein the baffle comprises at least one of foam insulation and brushes.

5. The thermal management cabinet according to claim 4, wherein the brushes extend from the electronic component storage area to at least one of the side walls, front and back of the cabinet.

6. The thermal management cabinet according to claim 4, wherein the at least one foam insulation comprises two flexible foam pieces positioned to allow cables to be passed therebetween.

7. The thermal management cabinet according to claim 1, wherein the horizontal member of the baffle is placed within the cabinet frame immediately above the highest electronic equipment stored within the thermal management cabinet, and wherein the thermal management cabinet further comprises a deployment device mounted on the cabinet frame for raising and lowering the vertical member of the baffle to a position approximately level with the horizontal member of the baffle.