The water in the closed loop within the system exchanges heat with the continuous supply of building-provided chilled water. This water circulates between the PU SCMs cold plates and a heat exchanger within the WCU. Heat from the PU SCMs is transferred to the cold plates, where it is in turn transferred to the circulating system water (closed loop). The system water then dissipates its heat to the building-provided chilled water within the WCU's heat exchanger. The PU SCMs are cooled efficiently in this manner.

This principle is shown in Figure 2-31.

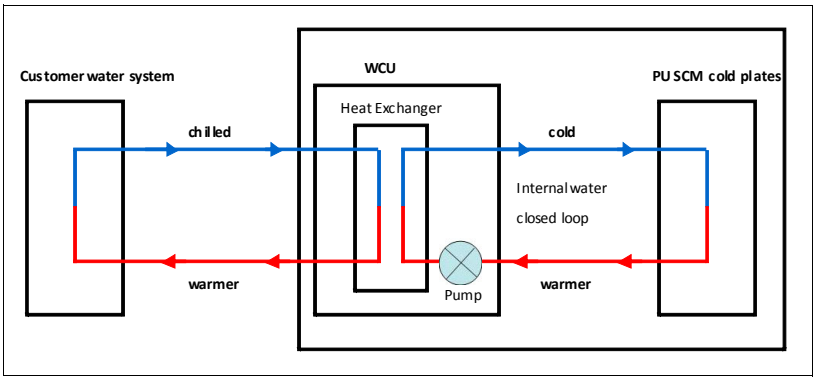

Figure 2-31 WCU water loop

z14 servers operate with two fully redundant WCUs. These water-cooling units have each their own facility feed and return water connections. If water is interrupted to one of the units, the other unit picks up the entire load, and the server continues to operate without interruption. You must provide independent redundant water loops to the water-cooling units to obtain full redundancy.

The internal circulating water is conditioned water that is added to the radiator unit during system installation with the Fill and Drain Tool (FC 3380). The FDT is included with new z14 servers. However, if you have an FDT from a zEC12 (FC 3378) in the data center, you can order an upgrade kit (FC 3379) to have the same equipment as in the FC 3380, and it can be used for the zEC12, z13, and z14 servers. The FDT is used to provide the internal water at the installation and for maintenance, and to remove it at discontinuance. The FDT is shown in Figure 2-27 on page 80.