Tolerance of immune system to body-self constituents is a crucial issue for immunologists to solve. While the mechanisms of central tolerance are now described to well extent, antigen-specific tolerance mechanisms on immunological periphery are just beginning to be revealed, characterized and appreciated. Recently, novel models of peripheral tolerance emerged. Particularly, a model based mostly on lymph node stromal cells could be of profound importance, since it provides answers to some fundamental questions in tolerance immunology. So far, no review paper highlighting these newly discovered roles of lymph node stromal cells was published. Therefore, in this study we summarize data covering this topic, published up-to-date. Further, this text provides a basic overview of lymph node functional anatomy. To better illustrate the topic, we also show some experimental evidence demonstrating lymph node architecture and the localization of extrathymic Aire-expressing cells, one of the lymph node-resident populations, recently implicated in peripheral tolerance maintenance.