This article aims to apply a network template for the structure interactions of actors of tourism in the city of Ouro Preto in Minas Gerais - Brazil, whose research, from the perspective of the tourist, reviewed the interconnections between the actors and their levels of connectivity. The theoretical review is based on analyses of authors that reference complex networks and its possible application in the tourism sector based technically on the topological survey from the network of tourism of Ouro Preto during the years of 2009 and 2010. It was used the method for application of 600 questionnaires and the analysis pondered by quantitative technique of an inferential statistic. The tabulation and analysis was developed through the programmes Excel and XMGRACE, building the structure of interaction of actors in the tourist network, which allowed the identification of the actors of the network and understand their interactive processes. In conclusion, it was found the existence of two distinct networks structures: the flow network and the indication network in the city of Ouro Preto.

KEY WORDS: networks, complex networks, social networks, tourism.