The Mongols at the apogee of their advancement conquered the regions from Korea to Hungary and established an empire that ruled over two thirds of Eurasia. This was achieved, in their belief, by the will of Tengri, the heaven god. Therefore, they had a great interest in reading the sky in order to understand celestial omens, which guided their earthly activities. Under the patronage of the Mongol rulers, astronomers in both China and Ilkhanate developed an extensive scholarly network and the astronomical achievements in both khanates reached a height which had not be seen before. This paper aims to reconstruct the dynamic networks of astronomers in both Yuan and Ilkhanate, and to discuss the possible points of intersection between the networks in the two khanates.