Integer ambiguity resolution in Precise Point Positioning (PPP) can shorten its convergence time and improve its accuracy significantly. As the Uncalibrated Fractional Offsets (UFO) originating in the satellites destroy the integer nature of ambiguities at a single station, several methods have been developed to estimate the UFO information from a reference network for PPP ambiguity resolution. In this paper, we present a new approach for estimating zero-differenced (ZD) UFOs from float ZD ambiguities of a reference network. In the new approach, UFOs for receivers and satellites are estimated in an integrated adjustment with the possibility of sequential integer ambiguity resolution, so that UFOs of higher quality can be achieved. The float ZD ambiguities used in the estimation can be from network or PPP solutions. By using the proposed approach, intensive experiments have been made to investigate the ambiguity resolution success rate under different situations. Firstly, the effect of number of stations in a network on success rate has been analyzed. Secondly, the effect of distribution of stations in a network on success rate has been investigated. Finally, the success rate will be computed under different distances between the PPP user and reference stations. The results show that higher success rate can be achieved with more reference stations and longer period observation in PPP. Using about 20 reference stations with 2500km station space to estimate the UFO, the PPP ambiguity resolution success rate can be over 90% with only 30 min observations. The positioning accuracy of millimeter level in horizontal and centimeter level in vertical could be achieved while the ambiguities are resolved successfully.