In this study, durable application of silver nano particles (Ag-NP) and zinc oxide nano particles (ZnO-NP) to the cotton fabric activated by corona plasma was investigated. The aim is to produce antibacterial fabric. In the study, washing durable application of the nano particles to the cotton fabric activated by corona plasma was investigated when a cross-linker did not use. The padding method was used for nano particle application. The presence and durability of the nano particles on the fabric were studied by Scanning Electron Microscopy (SEM) and Energy-Dispersive X-ray Spectroscopy (EDX) analysis. Antibacterial activity of the fabric was determined by a quantitative test method AATCC Test Method 100. Besides bursting tenacity and air permeability properties of the finished fabrics, whiteness and yellowness index were measured. According to the test and analysis results, washing durable application both of silver and zinc oxide nano particles to the corona plasma pretreated fabrics were carried out. Antibacterial activity of the fabrics against to S.aureus gram positive bacteria was determined.