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Groupoids are mathematical structures that have proved to be useful in many areas of science. A groupoid is a small category in which each arrow has an inverse and a group-groupoid is an internal groupoid in the category of groups. It is known that if $X$ is a topological group, then the fundamental groupoid $\pi_1 X$ is a group groupoid. Then the category $TGpCov/X$ of topological coverings of $X$ and the category $GpGdCov/\pi_1 X$ of group groupoid coverings of the fundamental groupoid $\pi_1 X$ are equivalent. Further if $G$ is a group-groupoid, then the category $\mathsf{GpGdCov}/G$ of group-groupoid coverings and the category $\mathsf{GpGdAct}/G$ of group-groupoid actions of $G$ are equivalent. We generalize these results to the internal groupoids in the category of groups with operation which include categories of groups, rings, associative algebras, associative commutative algebras, Lie algebras, Leibniz algebras, alternative algebras and others. If $X$ is an object of the category of groups with operations, , then the category $IntGdCov/G$ internal groupoid coverings and the category $IntGdAct/G$ of internal groupoid actions are equivalent. Also if $X$ is a topological group with operations, then the fundamental groupoid $\pi_1 X$ becomes an internal groupoid. Then the category $TGpOpCov/X$ of topological coverings of group with operations $X$ and the category $IntGpGdCov/\pi_1 X$ of internal groupoid coverings of the fundamental groupoid $\pi_1 X$ are equivalent.