Cohomology of Presheaves of Monoids.

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Abstract.

I will present an extension of Leech cohomology for monoids (and so Eilenberg-Mac Lane cohomology of groups) to presheaves of monoids on an arbitrary small category. Our main result states and proves a cohomological classification of monoidal prestacks on a category with values in groupoids with abelian isotropy groups. We also prove a cohomological classification for extensions of presheaves of monoids, Our results apply directly in several settings such as presheaves of monoids on a topological space, simplicial monoids, presheaves of simplicial monoids on a topological space, monoids or simplicial monoids enriched with an action of a fixed monoid or group of operators, etc.