

Multi-Sig Use Cases

m = signatures required to spend n = signatures possible

m=1 and n>1 Shared Wallet	Could be used for small group funds that do not require much security. Least secure multi-sig option because it is not multi-factor. Any compromised individual would compromise the entire group. Group funds for a weekend or evening event might be a good use case. A shared wallet might also be fun for some kind of games too. Besides being convenient to spend from the only benefit of this setup is that all but one of the backup/password pairs could be lost and all of the funds would be recoverable.
m=n Partner Wallet	Scary because no keys can be lost. As the number of signatures required increases the risk also increases. Could be thought of as hard multi-factor authentication.
m<.5*n Buddy Account	Could be used for spending from corporate group funds. Consequence for the colluding minority need to be greater than possible benefits. Is less convenient than a Shared Wallet, but much more secure.
m>.5*n Consensus Account	<p>The Classic Multi-Sig Wallet is a 2 of 3 and is a special case of a Consensus Account. I think 2 of 3 is the sweet spot for multi-sig. It has the best characteristics for creating new bitcoin address and for securely storing and spending BTC. One compromised machine does not compromise the funds. A password can be lost and the funds can still be recovered. If done correctly, off-site backups are created during wallet setup. The way to recover funds is known by more than one party.</p> <p>The balance of power created with a multi-sig wallet can be shifted by having one party control more keys than the other parties. If one person alone controls enough keys to use the wallet then it could be considered a Boss Account. When one party controls multiple keys there is a greater risk of those keys not remaining as multiple factors. A Boss Account also introduces a single point of failure, if the boss disappears, funds may not be recoverable.</p>
m=.5*n Split Account	An interesting use case would be a 3 of 6 where one person holds 3 keys and 3 people each hold 1 key. In this way one person could control their own money, but the funds could still be recoverable even if the primary key holder were to disappear with all of his keys. As n increases, the level of trust in the secondary parties can decrease. A good use case might be a family savings account that would just automatically become an inheritance account if the primary account holder were to die.