성영한	"enode://cd2646db943b935f0349c3d3abac334287bb8b69d8d18a8d2f3a54b992177714f7a5b2bc20f98252c23b91c0389ec9d45cf2ec7301f0eff5cf28ae46da3738d1@192.168.0.203:30303"	"0x3049014dcbf72d311c6b2ba87670ff61997dc1b1"	192,168,0,227 geth 1.9.x
미구	"enode://8a28b5ada39738a8e3d625ded87f28b30371263ee6eb2af15efb7eb78b4b0e42af91fe21fdf529679b92ef123910e5c29d985586d7f8b9f9c349c2dea52ee056@192.168.0.226:30303"	"0x5fdddad50a43e4a3a6ccdb4290a102b3661e7db7"	192.168.0.203 geth 1.8.x
신훈	"enode://2c3a70bcbfef93f9c925ac5a7b98c4c55a03130019cf90a4ba218f295e0b7e1b5dad8a80268c601751e29da68763ce521688a6d2f1e427b5a261569402ae8c89@192.168.0.38:30303"	"0xeb30f5375485f432fff40275cc56e7c1531cfa5b"	
기한빈	"enode://01e1b65e7c3895f893db1761a4353341aca7110aa70bfc2fcc45fa6f8170e36ad5c85f9033d89c2a00d3ba974ac29347df65853b2c7fdff827eb62d61a08abc1@192.168.0.225:30303"	"0x57cc6d2bd4642e4b9cefb2cb9c3b1867dd9bde65"	
여인영	"enode://807d6ee63badcb4084b3065afbf7292babe7af32f359e668e8c719aac7f5ab2ad61c8a47b3d331b31171b77da0241028dbf9d7c25a9f2b2e0fe200865bb7598c@192.168.0.107:30303"	"0x5da3c361b66bc96a55c31d218cdde17f6365ef53"	
서봉석	"enode://c314080c0c68b1dd742b933caefd69f150c13b7bbbb95290da71be55a20c0bbfac99095862d8a483e274b676205dc3c9f3f91dfc131c932db91b0bebffb99470@192.168.0.198:30303"	"0xbc05fb621a270bc2512fe701559294c89f39c27b"	
son 에디터	http://isoneditoronline.org/		
geth 초기화			
geth 노드 접근	geth –datadir data-v1 init genesis, json		
RPC 서버 작동	gethdatadir data-v1port 30333networkid 15 console 2>console.log admin.startRPC("127.0.0.1", 8545 , **", "web3,eth,net,personal");		
C VIII 48	aumin.sarinr-ci_127.0.0.1, e3-0.3., we0.gen_ine_personal_j, gethdatafir data-v1port 30333 -networkid 48 -rpcrpcapi web3,eth_net_personal,		
geth 노드 접근 및 RPC 서버 작동	gentdatabut date-v1put obs553inevokind 49ipcipcapi webs,eur,iner,personar, pcport "8545"pccorsdomain "" console 2-console.log		
RPC 서버 중지	admin.stopRPC();		
노드(node)정보	admin.nodeInfo		
피어(peer) 정보	admin.peers		
자기 노드에 다른 노드추가	admin.addPeer("enode정보");		
계정생성	personal.newAccount();		
사용자 리스트	eth.accounts		
해당노드에 기본 사용자 설정	eth.defaultAccount = eth.accounts[0]		
특정사용자 lock 해제	personal.unlockAccount(eth.account[0]);		
총 블럭수	eth.blockNumber		
마이닝 시작	miner.start(1);		
마이닝 중지	miner.stop();		
마지막 블럭의 마이너 주소	eth.getBlock(eth.blockNumber).miner		
첫번째 계정의 잔고	eth.getBalance(eth.accounts[0])		
wei을 ether로 바꾸기	web3.fromWei(100000000000, 'ether')		
ether을 wei로 바꾸기	web3.toWei(3000,'ether')		
특정 사용자에게 ether 보내기	web3.eth.sendTransaction((ffom:"0x3049014dcbf72d311c6b2ba87670ff61997dc1b1",to: "0x5fdddad50a43e4a3a6ccdb4290a102b3661e7db7",value: web3.toWei(10, ether)));		
대기중인 트랜잭션 정보보기	eth.pendingTransactions		
geth download	https://qeth.ethereum.org/downloads/		
solidity browser compile	https://remix.ethereum.org/		
	pragma solidity 0.5.3;		
	contract HelloWorld {		
	string message;		
	constructor (string memory msg) public{		
	message = msg; }		
	function getMessage() public view returns(string memory msg) (msg = message;		
	function setMessage(string memory newMessage) public {		
	message = newMessage;		
	s'		
web3.js download	https://github.com/ethereum/web3.js/		
web3.js api	https://github.com/ethereum/wiki/wiki/JavaScript-API		
solidity document	http://solidity.readthedocs.jo/en/develop/		