

Instruction class	Instruction name(s)	Function
ALU	Byte align	Take a pair of registers and extract a word or double word of bytes. Used to implement unaligned byte copies.
	Align Immediate to PC	Adds the upper 16 bits of the PC to an immediate shifted left 16 bits and puts the result in a register; Used to get a PC-relative address.
	Bit swap	Reverses the bits in each byte of a register.
	No-op and link	Puts the value of PC+8 into a register
	Logical NOR	Computes the NOR of 2 registers
Control transfer	Branch and Link conditional	Compares a register to 0 and does a branch if condition is true; places the return address in the link register.
	Jump indexed, Jump and link indexed	Adds an offset and register to get new PC, w/wo link address

FIGURE E.19 Additional instructions provided MIPS64 R6. In addition, there are several instructions for supporting virtual machines, most are privileged.