A KMS state on the resolvent CCR algebra

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This is a joint work with professor Taku Matsui. We consider equilibrium states of weakly coupled anharmonic quantum oscillators on $\mathbf{Z}$. We consider the Resolvent CCR Algebra introduced by D.Buchholtz and H.Grundling, and we show that the infinite volume limit of equilibrium states satisfies the KMS (Kubo-Martin-Schwinger) condition with good regularity(= locally Fock representation). Uniqueness of the regular KMS states is proven as well.