```
ma-single-pre-feasible  THM

⊢  ∀a:Id, T:Type, ds:x:Id fp-> Type, P:(State(ds)→T→Prop).
   T
   ⇒
   ∀x∈dom(ds). A=ds(x) ⇒  A
   ⇒
   (∀s:State(ds). Dec(∃v:T. P(s,v)))
   ⇒
   Feasible((with ds: ds
    action a:T
    precondition a(v) is
    P s v))
  by ProveItFeasible THEN DVar ‘ds’ THEN Reduce 0
     THEN
     All
     (λi.
      Repeat (Unfolds [‘fpf-all‘;‘fpf-ap‘;‘fpf-dom‘] i) THEN Reduce i)
     THEN
     Try BackThruSomeHyp
     THEN
     Try (OrLeft THEN Complete Auto)
     THEN
     SplitOnConclITE
     THEN
     Analyze -2
     THEN
     RW assert_pushdownC -3
     THEN
     Analyze -3
     THEN
     All (RWO "deq_property<")
     THEN
     Analyze
END
```