ISR’s Viability as an SOE System

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1. Push new patches and updates seamlessly to users
   - Vision: Patching of OS + Applications should not depend on users or the application itself
   - IT support teams should be able to patch once and deploy everywhere
   - ISR does not currently support this but it can be easily added as follows

1. Push new patches and updates seamlessly to users (2)
   - Create a gold OS image (this is read only)
   - All user changes go into a writable network directory (user files, documents, user preferences, etc.)
     - Might be managed by ISR as a separate disk image
   - OS updates are made to the gold OS image
     - Everyone gets the updates next time they checkout the image (can enforce checkouts as well)

1. Push new patches and updates seamlessly to users (3)
   - Use thinstall-type solutions for applications
     - Patch the thinstall application
     - Everyone gets the patched version next time
     - User preferences and changes are not touched

1. Push new patches and updates seamlessly to users (4)
   - Pros
     - Allows IT admin complete control over the OS
       - It is read-only
     - Applications are patched independently
       - No messy OS/application interactions
       - Can maintain multiple versions of applications if needed
   - Cons
     - Users lose flexibility
       - Can only modify files in their sandboxes

2. Dynamic application license brokering
   - Vision: company uses multiple software that have site licenses. They want to be able to dynamically deploy these licenses without needing too much maintenance infrastructure
   - This can be achieved with ISR + thinstall
     - Central license server is checked before thinstalled application is deployed (licenses are updated dynamically)
     - Gold ISR OS image has OS-specific modules to validate and verifying licensing (even when disconnected)
3. Support multiple user roles easily and flexibly

• Vision: Different users in a company need different access to their machines
  — E.g., tellers need just read access, faculty need complete access

• This is tricky.
• ISR can support any kind of role system
  — *but* what type of roles need to be supported must be clearly stated
  — ISR team is willing to work with us on supporting clear usage scenarios

4. Deploy new enterprise applications

• Vision: company decides that everyone should now use application X. It should be easy for application X to “magically” show up on every computer.
• ISR + Thinstall will deliver this
  — Update the gold ISR image with a pointer to the new application
  — Thinstall the new application
  — non-thinstalled applications can also be supported by ISR
    • Harder. Requires keeping full application install logs

5. Seamless desktop & work mobility

• Vision: Users can access their work desktop on any machine, anywhere
• This is the ISR vision
• Fully supported by ISR

6. Reliability & Ability to self-fix

• Vision: Users are able to retrieve backups of their system and be able to automatically go back in time to known good versions
• ISR status: ISR supports this manually currently
  — Users can manually check in anytime they want
  — Server already does automatic checkpointing
  — Making it more automatic is easy though
  — Some changes to the client
    • GUI tools (may not be done by the ISR team)
    • Scripts to regularly commit VMs for backup reasons

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**Scenario Feasibility**

<table>
<thead>
<tr>
<th>Scenario</th>
<th>ISR</th>
<th>Feasible?</th>
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<tbody>
<tr>
<td>1. Updates</td>
<td>ISR team is willing to support this. Will require creating a read-only gold image with use of thinstall type solutions &amp; proper user sandboxing</td>
<td>Very promising</td>
</tr>
<tr>
<td>2. Licenses</td>
<td>Can be supported with guest OS patches + a thinstall-type solution</td>
<td>Very promising</td>
</tr>
<tr>
<td>3. Roles</td>
<td>ISR team is willing to support this. But they need clear usage scenarios. We might need to provide assistance to develop GUI tools for 1.4</td>
<td>Yes. With proper usage specifications</td>
</tr>
<tr>
<td>4. App Deploy</td>
<td>Can be supported with ISR gold image + thinstall</td>
<td>Very promising</td>
</tr>
<tr>
<td>5. Mobility</td>
<td>Already Supported</td>
<td>✓✓✓</td>
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<tr>
<td>6. Recovery</td>
<td>Small patches needed to ISR client.</td>
<td>✓✓✓</td>
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