

Intro to Workflow 4.0

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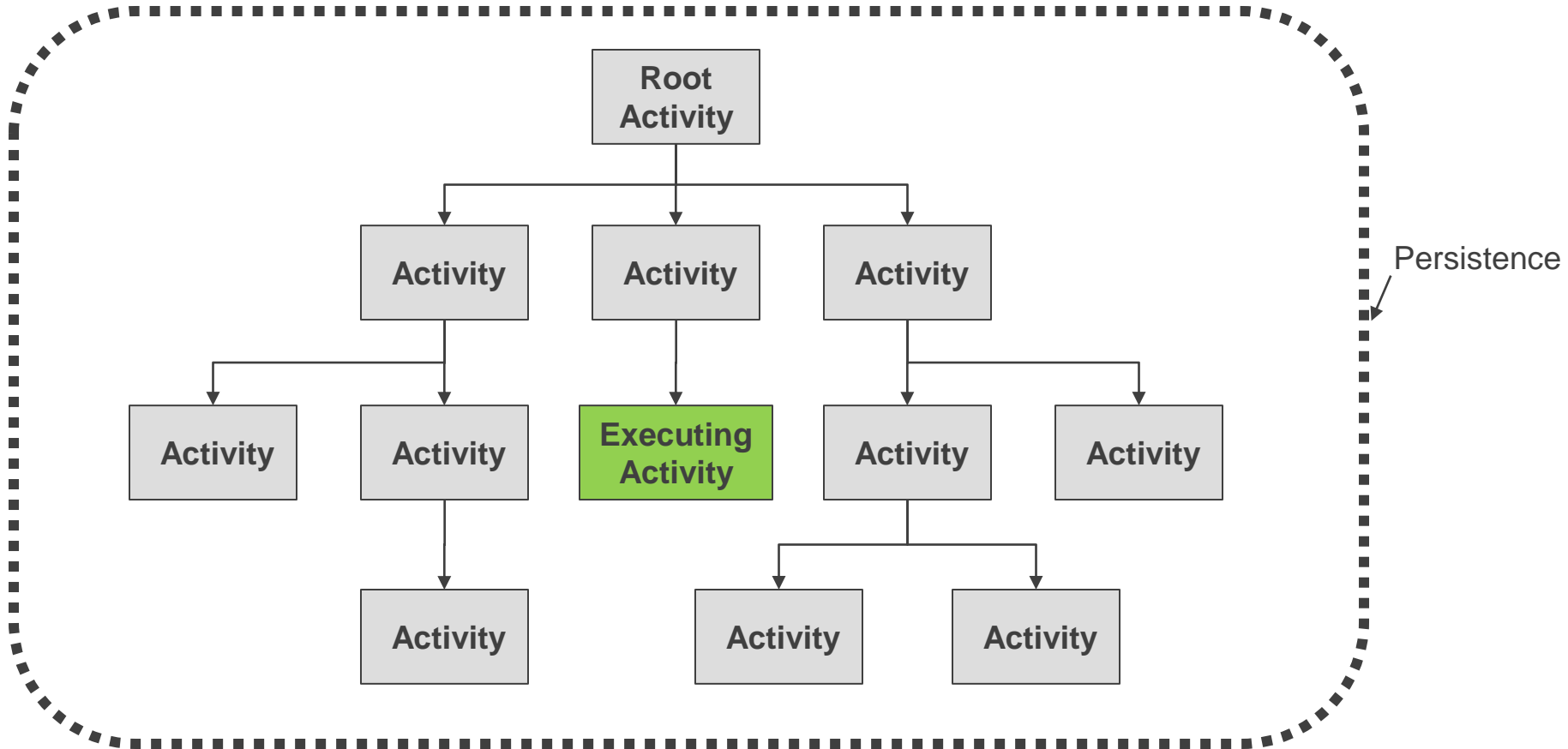
What/Why of Workflow

- **Coordinates work**
- **Consists of Activities, Runtime, and Tooling**
- **Should be**
 - long-running
 - stateful
- **Probably be**
 - human centered
 - many running at one time

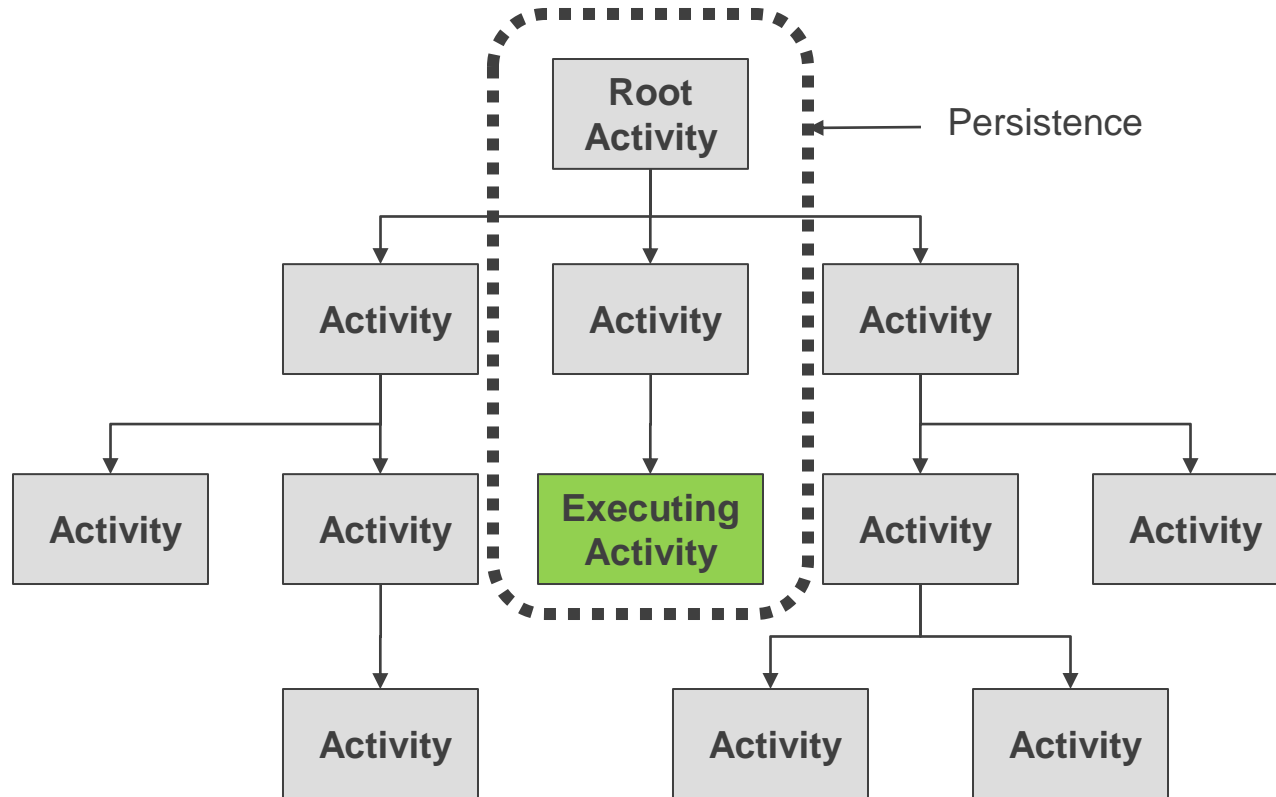
From Workflow 3.5 to 4.0

- **WF 4.0 was rewritten completely**
- **Significant performance improvements**
 - mainly due to the persistence changes

WF 3.5 Persistence



WF 4.0 Persistence



Activities

- **Primitive unit of behavior in WF**
- **Composable into higher level activities**

- **New concepts in 4.0**
- **Arguments**
 - Flowing data into and out of activities
 - Direction, Type, and a Name
- **Variables**
 - For storing data across activity boundaries
 - Arguments can be bound to any variables in scope

Coordinating work (1)

```
{  
    string user      = Console.ReadLine();  
    string password = Console.ReadLine();  
    validate(user, password);  
}
```

State

Input

Control Flow

Coordinating work (2)

Input

```
void GetUser(string user)
{
}

```

Input

```
public void GetPassword(string password)
{
    validatePassword(user, password);
}

```


Coordinating work (3)

Input

```
public void GetUser(string user)
{
    State.Set("user", user);
}
```

Input

```
public void GetPassword(string password)
{
    string user = State.Get("user");
    validatePassword(user, password);
}
```

Coordinating work (4)

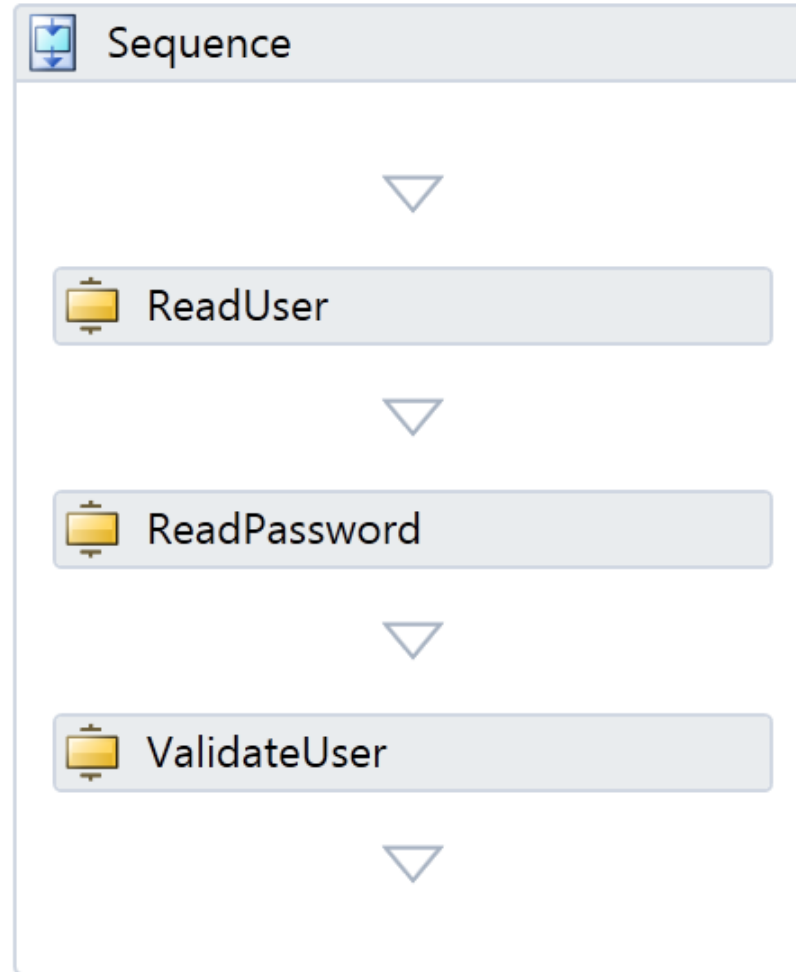
Input

```
public void GetUser(string user)
{
    bool haveUser = State.Get("haveUser");
    if (haveUser) throw new Exception();
    State.Set("haveUser", true);
    State.Set("user", user);
}
```

Input

```
public void GetPassword(string password)
{
    bool haveUser = State.Get("haveUser");
    if (!haveUser) throw new Exception();
    string user = State.Get("user");
    validatePassword(user, password);
}
```

Coordinating work (5)



Demo Time

Thank You



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